



## Editorial

Journal of Economics and Behavioral Studies (JEBS) provides distinct avenue for quality research in the ever-changing fields of economics & behavioral studies and related disciplines. Research work submitted for publication consideration should not merely limited to conceptualization of economics and behavioral developments but comprise interdisciplinary and multi-facet approaches to economics and behavioral theories and practices as well as general transformations in the fields. Scope of the JEBS includes: subjects of managerial economics, financial economics, development economics, finance, economics, financial psychology, strategic management, organizational behavior, human behavior, marketing, human resource management and behavioral finance. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal and that all listed authors approve its submission to JEBS. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. Journal received research submission related to all aspects of major themes and tracks. All submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer-reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance, and clarity of the purpose. The current issue of JEBS comprises papers of scholars from Zimbabwe, South Africa, Indonesia and France. Perceptions of Small-Scale Farmers on Tobacco Contract Farming, Determinants of Mandatory Disclosure for Local Government Financial Statements, Sustaining the Township Economy: An Investigation into the Factors Influencing the Shopping Experience of Spaza Shop Customers, Indonesia-China Trade Performance in the RCEP Forum, Local Government Financial Performance: The Role of Political Monitoring and An Analysis of the Experimental Design of "My Money or Yours: House Money Payment Effects" were some of the major practices and concepts examined in these studies. The current issue will therefore be a unique offer where scholars will be able to appreciate the latest results in their field of expertise and to acquire additional knowledge in other relevant fields.

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# PAPERS

**Perceptions of Small-Scale Farmers on Tobacco Contract Farming: The Case of Marondera Rural District, Zimbabwe**

Ruzhani Freddy<sup>1\*</sup> & Mushunje Abbyssinia<sup>2</sup>

<sup>1</sup>Department of Agricultural Economics and Development, Manicaland State University of Applied Sciences, Mutare, Zimbabwe

<sup>2</sup>Department of Agricultural Economics and Extension, University of Fort Hare, Alice, South Africa  
freddyruzhani@gmail.com, freddy.ruzhani@staff.msuas.ac.zw, fruzhani@yahoo.com

**Abstract:** Small-scale farmers' perceptions of tobacco contract farming schemes in the Marondera rural district of Zimbabwe were critically assessed in this paper. The multi-stage sampling design was used to select five wards with the highest number of tobacco contracted farmers from where 60 contract and 60 non-contract tobacco farmers were randomly selected. A 5-point Likert scale was used to rank farmers' perceptions. The paper established that small-scale farmers in Marondera rural district strongly believe contract farming makes it possible for the majority of farmers to venture into the production of high-value crops as it provides access to the much-needed markets while reducing the risk of price fluctuations. However, the majority of the respondents believed that contract farming is not profitable and there is a manipulation of farmers in contract farming arrangements. The independent samples t-test indicated a significant difference in perception score between participants and non-participants of tobacco contract farming schemes ( $p < 0.05$ ). The farmers who were not participating in tobacco contract farming schemes had a more positive perception of these schemes while those who participated had a more negative perception. The major implication is that gains associated with tobacco contract arrangements are not always apparent to farmers while the disincentives may be more visible. It is therefore fundamental that contract companies address some of the shortcomings existing in these contractual arrangements as well as change the perception of the farmers to develop mutually beneficial lasting relationships with their major stakeholders.

**Keywords:** *Contract farming, Perceptions, Small scale farmer, Tobacco, Likert scale, independent samples t-test.*

## 1. Introduction

Tobacco contract farming schemes are on the rise in Zimbabwe offering small-scale farmers access to credit and required inputs with payment being demanded at the marketing stage. Contract farming is viewed as an institutional solution to the problems of market failure in the markets of credit, insurance, information and in transaction costs associated with search, screening and transfer of goods, bargaining and enforcement (Key & Runstern, 1999). It is therefore seen as a means to incorporate small-scale farmers into growing markets for processed goods and export commodities such as tobacco. Since the contracts often involve the provision of seeds, fertilizer, chemicals and technical assistance on credit and a guaranteed price at harvest, contract farming is seen as a form of vertical coordination that simultaneously solves many constraints on small farm productivity (Miyata, Minot, & Hu, Impact of Contract Farming on Income: Linking Small Farmers, Packers, and Supermarkets in China. 37(11).1781-1790., 2009). It has thus been a component of the most successful income-generating projects for smallholders, as well as an important earner of foreign exchange in developing countries (Kirstern & Sartorius, 2002).

While contract farming promises significant benefits for growers in many cases, studies have highlighted circumstances in which members of the rural population have realized only limited gains, or have been directly or indirectly harmed (Key & Runstern, 1999). Critics of contract farming argue that large agribusiness firms use contracts to take advantage of cheap labor and transfer production risks to farmers. In support of this view, Kirstern & Sartorius, (2002), mention that contract farming faces strong criticism as it is viewed by some as just another form of exploitation with limited equity impact, increasing socio-economic differences with evidence of some unsuccessful schemes and problems for many out growers being noticed. Contract farming is seen as a form of vertical coordination that simultaneously solves many constraints on small farm productivity. However, participation in contract farming schemes can be strongly influenced by many socio-economic factors as well as farmers' perceptions of the program. According to Adesina & Baidu-Forson, (1995), perceptions play a major role in the behavior of farmers towards the use of new technology.

In general, perceptions result in either a positive or negative attitude towards technology or any new developmental initiative in society.

A positive or negative attitude will ultimately influence participation in these developmental initiatives. It is therefore very pertinent to assess farmers' perceptions towards tobacco contract farming schemes, to find ways to improve farmers' participation by changing their negative perceptions, if any, towards the schemes. The main objective of this paper was to critically assess small-scale farmers' perceptions of tobacco contract farming schemes in Zimbabwe. This paper is expected to assist stakeholders, especially tobacco contract farming companies and the government in knowing areas that need to be addressed to encourage participation in tobacco contract farming schemes for the success of smallholder agriculture as well as economic growth and development in Zimbabwe.

## 2. Review of Related Literature

Contract farming offers many benefits, especially to poorly resourced smallholder farmers. However, the debate on whether contract farming is really beneficial has been a subject of concern in the literature. Several research studies provide empirical evidence on the benefits of contract farming in various countries across the world. Farmers who participate in contract farming usually benefit from high yields which translates to higher income and profits (Little & Watts, 1994; Cai, Ung, Setboornsarng, & Leung, 2008; Kumar & Kumar, 2008; Narayanan, 2014; Kumar, Roy, Joshi, Tripathi, & Adhikari, 2019; Eaton & Shepherd, 2001; Glover & Kusterer, 1990; Fulton & Clark, 1996; Miyata, Minot, & Hu, 2009). This is mostly attributed to the use of hybrid seeds, timely application of fertilizers and better management practices from knowledge obtained by farmers from contract companies' extension officers. Studies in Zimbabwe indicate that the production of cash crops (i.e., cotton) can have positive spillover effects on food crop production and the development of services in areas where contract farming is practiced (Woodend, 2003). In addition, an extension of loans in cash has been witnessed in contract farming arrangements in Zimbabwe. For instance, as mentioned by Woodend (2003) in COTTCO's contract schemes, farmers who performed well would receive a cash loan to pay labor, however, any remaining loan was carried on to the next seasonal contract and then interest would accrue.

Despite contract farming being attributed to food security problems Minot (1986), in a study in Kenya mentions that farmers in the contract production schemes had a higher degree of self-sufficiency in food compared to independent farmers. On the other hand, and despite the vast benefits of contract farming literature, another thread of literature raises concern about various forms of exploitation associated with most contract farming schemes (Bijman, 2008; Adams, Gerber & Amacker, 2019; Carney, 1998; Clapp, 1994;). A number of problems accruing from these contract arrangements in many countries have been reported. For example, Kumwenda and Madola (2005), argue that small-scale farmers in Malawi are at risk when entering contracts because they lack collateral and the legal and insurance systems are weak. In another study, farmers felt that they had little bargaining power compared with that of the companies, which they perceived benefited more than them and that they had become dependent on the firms for credit and other inputs (Fulton & Clark, 1996). From both perceived and real benefits and problems associated with contract farming schemes, farmers can develop an attitude towards contract farming schemes in general which will have a direct influence on their decision to join or exit contract farming arrangements. Specific perception studies on contract farming schemes haven't been undertaken in Zimbabwe.

In other countries, Mergesa and Arsefa (2019) explored the perception of farmers on contract farming as a response to climate change adaptation in Ethiopia. Their findings revealed that participants of contract farming schemes have a better understanding of important aspects of these schemes compared to non-participants. In India Rout, Mishra, Bar and Mondal, (2013) explored the perceived benefits and disadvantages of Sugarcane contract farming. Their findings revealed that contract farming was hampered by many constraints namely, delay of payment of produce, lack of credit, and scarcity of water for irrigation among others. The perceived benefits were the provision of inputs such as seeds and fertilizers on credit with costs being deducted at delivery. Ruml and Qaim (2021) conducted a study in Ghana on farmers' dissatisfaction with contract schemes. They found out that despite smallholder farmers benefitting from higher yields and incomes most of the farmers still regretted their decision to participate in these schemes

and would prefer to exit the contracts. This paper focused on the perception dimension of both participants and non-participants of tobacco contract farming in Zimbabwe to understand how the major stakeholder of the contracts perceive these arrangements.

### 3. Materials and Methods

The study encompassed all small-scale tobacco farmers in Marondera rural district, Mashonaland East Province as the sampling frame. The unit of analysis was the head of the household. From this frame, five contract farming wards were selected based on the highest number of small-scale tobacco contract farmers according to the lists provided by contractors. According to the Tobacco Logistics Business Plan (2012), there are two categories of tobacco farmers in Zimbabwe, small scale and large scale. The differentiation is based on crop hectareage, output and level of mechanization of operations. In general, 72% of tobacco grown in Zimbabwe is under small-scale farmers who rely on rain-fed irrigation for their crops. In addition, their hectareage is usually lower than 10 hectares per farmer. Based on the above description respondents to take part in the study (both contract and independent farmers) were selected based on the following:

- Tobacco hectareage was supposed to be lower than 10 hectares.
- The farm was supposed to rely on rain-fed irrigation.

The research focused on both participants and non-participants of contract farming. The multi-stage sampling design was adopted taking into consideration the five wards with the highest number of contracted farmers. Two homogeneous mutually exclusive strata were created (stratum A= contract farmers) and (stratum B = non-contract farmers) for an independent analysis. Lists of small-scale tobacco contract and non-contract farmers were obtained from extension officers for the five wards and were used to randomly select respondents. A large sample is more representative but very costly while a small sample is less accurate but more convenient (Bless & Smith, 2000). In line with this, the research survey targeted a suitable sample size of small-scale tobacco farmers in the Marondera rural district. Data were collected from a total of 120 small-scale tobacco farmers (60 contract farmers and 60 non-contract farmers). Fifteen contract and fifteen non-contract farmers were thus selected from each ward using the sampling procedure highlighted above. Table 1 summarizes the distribution of respondents with respect to their wards.

**Table 1: Distribution of Respondents with Respect to Their Wards**

Sampling Units	Participation in Contract Farming		Total
	Participants	Non-Participants	
Ward 2	15	15	30
Ward 4	15	15	30
Ward 6	15	15	30
Ward 23	15	15	30
Total	60	60	120

Descriptive statistics were used to describe the basic features of the sample farmers as well as in assessing their perceptions of contract farming by means of tables and simple summaries. These are useful tools in analyzing household characteristics as well as analyzing the relationship between variables of different groups. In order to rank farmers' perceptions with regard to tobacco contract farming schemes, a 5-point Likert scale was used. This method is now one of the dominant methods of measuring people's attitudes, views and experiences (Taylor & Heath, 1996). The questionnaire contained thirteen statements or facts about contract farming identified from the literature, to which the respondents reacted by indicating their level of agreement or disagreement. The respondents rated the statements based on scores ranging from a minimum of -2 to a maximum of 2, where Strongly Agree = 2, Agree = 1, Neutral = 0, Disagree = -1 and Strongly Disagree = -2. The scores for each perception were then summed for all respondents to come up with an overall score which was used to rank the perceptions in order of importance. An overall perception score was then determined for each respondent and an independent samples t-test was used to test if there were significant differences in mean perception score between participants and non-participants of tobacco contract farming schemes.



#### 4. Results and Discussion

**Household Characteristics:** A sample of 120 households was interviewed, 85% of which were male-headed while 15% were female-headed. Most heads of households were married (65%), 8.33% single while the widowed and divorced were 16.67% and 10% respectively. Out of the 120 respondents, 50.83% had acquired secondary education while 15% had acquired tertiary education. Only 9.17% of the respondents had no formal education while 25% had attained primary education. In this study, the highest educational level achieved by the household head was recorded to determine the human capital level of households and their ability to interpret information. Education makes it easier for households to comprehend the negative externalities of an initiative such as contract farming and this helps them to make informed decisions before deciding to join these schemes. Table 2 provides a summary of these characteristics showing a comparison between contract and non-contract respondents.

**Table 2: Summary of Household Characteristics**

Variable	Total (%)	Contract (%)	Non-Contract (%)
<i>Gender</i>			
Male	85	53.92	46.08
Female	15	27.78	72.22
<i>Marital Status</i>			
Single	8.33	60	40
Married	65	51.28	48.72
Divorced	10	50	50
Widowed	16.67	40	60
<i>Level of education</i>			
No formal education	9.17	27.27	72.72
Primary level	25	26.67	73.33
Secondary level	50.83	57.83	42.62
Tertiary level	15	77.78	22.22

**Source:** Survey data, (2013).

On average the age of the respondents was 47.77 years with a standard deviation of 8.014 indicating that most smallholder tobacco producers in the Marondera rural district were fairly middle-aged farmers. The minimum age of the respondents was 27 and the maximum age was 65. The average household size was 5.82 with a minimum and maximum size of 2 and 10 respectively. The average number of effective workers per household was 3.33 with a range of 1 to 6. The number of effective workers per household for contract farmers (3.7) was more than that of non-contract farmers (2.97). This information is shown clearly in table 3 with a comparison of these characteristics between contract and non-contract producers.

**Table 3: Comparison of Characteristics Between Contract and Non-Contract Producers**

Variable	Contract Farmers (n = 60)			Non-Contract Farmers (n = 60)		
	Mean	Range	Standard Deviation	Mean	Range	Standard Deviation
Household size	5.77	3 - 10	1.835	5.87	2 - 10	1.909
Number of Effective Workers Per Household	3.7	2 - 6	1.197	2.97	1 - 6	1.235
Age	47.67	32 - 64	8.014	47.87	27 - 65	9.041

**Source:** Survey data, (2013).

**Perceptions of Small-Scale Farmers on Contract Farming:** Farmers share different perceptions with regard to contract farming. According to Adesina and Baidu-Forson (1995), perceptions play a major role in the behavior of farmers towards the adoption of new initiatives and the use of new technology. Perceptions of smallholder farmers with regards to many advantages and disadvantages of contract farming arrangements in tobacco production were solicited and ranked. The ranked perceptions are presented in table 4 below.

**Table 4: Perceptions of Respondents on Contract Farming**

Perception Rank	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Score
	Agree	Disagree				
Contract farming enhances access to markets 1	64	44	4	6	2	162
Contract farming reduces the risk of price fluctuations 3	58	29	19	9	5	126
Contract farming enhances farmer's access to timely inputs 7	44	24	24	20	8	76
Contract farming provides credit and financial intermediation 8	28	28	48	12	4	64
Contract farming increases access to technology and skills development 12	16	26	42	26	10	12
Contract farming makes it possible for small scale farmers to start producing higher value crops 2	54	54	8	2	2	156
Contract farming is profitable 11	16	42	24	24	14	22
Contract farming increases risk of indebtedness 5	50	36	20	10	4	118
Contract farming increases family workload 8	28	34	40	10	8	64
Contract farming increases food security problems 13	4	6	18	42	50	-128
A weak legal framework leads to easy manipulation of farmers in contract farming schemes 6	14	66	32	8	0	86
Contract farming leads to loss of autonomy 10	14	40	52	10	4	50
Contract farming benefits contractors more than farmers 3	52	38	16	12	2	126

"Strongly Agree" as 2 points, "Agree" as 1 point, "Disagree", as -1, "Strongly Disagree" as -2 and "Neutral" as 0.  
**Source:** Survey data, (2013).

The majority of smallholder tobacco farmers believe that contract farming enhances access to markets (Rank 1). As mentioned by (Setboonsarng, 2008), the most important constraint faced by smallholders is the lack of assured markets with fair prices. Simmons (2002) also supports this notion as he mentions that in the absence of contracts markets are 'missing' in the sense that transaction costs of accessing them on a small scale are effectively infinity. Therefore, one of the principal motives for smallholders to enter into contract farming arrangements is the promise of a steady and increased income from having an assured market. A market outlet is secured for the contracted production, such that the uncertainty and the transaction costs involved in the search for markets are reduced. Tobacco production is an expensive venture that most small-scale farmers may fail to start on their own without some form of assistance. The perception that ranked second among smallholder tobacco farmers is that contract farming made it possible for small-scale farmers to start producing higher-value crops. This perception can be regarded as a very important factor that determines why small-scale farmers choose to participate in tobacco contract farming schemes. Tobacco is often a riskier crop that small-scale farmers are less likely to partake in on their own. Since agro-business firms possess an interest in the production of high-value crops, their contractual arrangements often facilitate the introduction of new production techniques.

Thus, contract farming can be seen as a conversion path from subsistence to commercial farming. This is supported by Prowse (2012) who mentions that contract farming stimulates the broader commercialization of smallholder farming in developing countries. Contract farming usually results in predetermined prices at the start of the production season. This enables farmers to be certain and plan their operations accordingly. Although prices are not predetermined in tobacco contract farming in Zimbabwe respondents were asked to reveal if they thought contract farming led to a reduction in the risk of price fluctuations in general. This perception ranked third with a score of 126. A huge number of smallholder tobacco producers believed that contract farming indeed led to a reduction in the risk of price fluctuations. As is normally the case in agriculture, prices can fluctuate drastically from region to region and within a growing season. Smallholder farmers have little access to information and face the risk of losing substantial income if prices fluctuate downward. According to Weiss and Khan (2006), a predetermined price for a crop under contract is usually established during contract negotiations at the onset of the growing season.

Most smallholder tobacco farmers believed that uncertainty about the selling price is reduced since contracts typically specify at the beginning of the growing season the prices to be paid at delivery. This protects farmers from incurring losses in sales due to price fluctuations and thus this is a very important factor that determines why farmers join tobacco contract schemes. Also ranked third with a score of 126 was the perception that contract farming benefited contractors more than farmers. It is often believed that contractors take advantage of the financial challenges faced by small-scale farmers to manipulate the farmers and gain more in the end. Most of farmers believed that there is an unbalanced relationship where the contractor benefits more than the farmer in contract farming arrangements. This perception can therefore be one of the factors which farmers may consider when deciding not to participate in tobacco contract farming schemes. There exists a general belief that contract farming increases the risk of indebtedness. Easy access to credit can result in small-scale farmers incurring mounting debts. GRET (2012) and Da Silva (2005) mention that, as farmers find fewer restrictions to access credit, they might find an incentive to borrow, even to finance consumption and other non-commercial needs.

A significant proportion of respondents were in agreement with this perception (rank 5 with a score of 118). As supported by Boughton et al. (2007) the risk of indebtedness is likely to be higher in tobacco contract farming than in other contracted crops mainly because tobacco farming is expensive compared to most crops thus requiring the provision of more credit compared to most contracted crops. As such farmers who enter into tobacco contract farming schemes have to be willing to take the extra risk of higher financial losses in the event that the crop fails. Ranked 6<sup>th</sup> with a score of 86 was the perception that contract farming is hampered by a weak legal framework. Implying that a sizeable number of smallholder farmers believed this perception to be true. Contracts can be verbal and if written are not always in the vernacular and this can result in manipulation of conditions. Furthermore, if the contracting firm for any reason chooses to end the contract, farmers may lose their only source of income and their livelihoods will be threatened. This problem according to Pultrone (2012) emanates from a weak legal framework and slow litigation processes. If contracts are breached farmers cannot easily charge the firms and be compensated for damages. Contract farming is believed to enhance farmers' access to timely production inputs.

This perception was ranked 7<sup>th</sup> with a score of 76. Although some anomalies exist in the timeliness of the inputs given by different tobacco contractors a sizeable number of respondents agree with this perception implying that this is a very fundamental factor in the decision made by farmers in choosing whether to participate in tobacco contract framing schemes or not. This is supported by Setboonsarng (2008) who mentions that low inputs, limited transportation infrastructure and timely access to inputs are significant problems for smallholders in remote areas. Contractors frequently and normally undertake measures to ensure that contracted producers have timely access to inputs such as seeds and fertilizers. Ranked 8<sup>th</sup> with a score of 64 was the perception that contract farming provides credit and financial intermediation. Lack of credit is one of the major constraints hindering small-scale agricultural development in general. Contract farming is believed to provide much-needed credit to the farmers. The study noted that only a few contracting companies in Marondera rural district provided credit in the form of cash for labor and other requirements to the contracted farmers. As posited by Eaton and Shepherd (2001), formal credit markets in rural areas of developing countries rarely exist where they do exist, banks are reluctant to lend to smallholders.

Furthermore, the production of non-traditional cash crops such as tobacco generally entails greater expense than the production of traditional subsistence crops. As such this perception plays a huge role in generating interest in small-scale farmers to engage in tobacco contract farming arrangements. In some instances, contract farming is seen as an exploitative and even self-exploitative system whereby the smallholder farmer exploits his/her own household to meet the requirements and demands set by the company. Critics of contract farming argue that companies exploit farmers in a bid to gain access to cheap labor and indirect access to land (Singh, Contracting Out Solutions: Political Economy of Contract Farming in the Indian Punjab, 2002). The perception that contract farming increases family workload is also a very important factor that determines if farmers participate in tobacco contract farming schemes or not. This perception was also ranked 8<sup>th</sup> with a score of 64. There are also other perceptions and beliefs which are thought to influence farmers in their decision to participate in tobacco contract farming schemes. A number of these perceptions were however dismissed by this study since the majority of farmers do not believe them to be true. Most importantly, critics argue that contract farming impacts negatively on food security by promoting the production of export cash crops.

According to Singh (2002), contract production tends to shift farm production in favor of export-oriented and cash crops at the cost of basic food crops for the poor leading to food security problems. This perception was ranked last (13<sup>th</sup>) with a score of -128 implying that farmers do not believe tobacco contract farming may lead to food security problems. It was also discovered that maize is still treated as a very important crop by almost all respondents as they all grew at least 1ha despite low prices offered by the Grain Marketing Board. As such the perception of contract farming increasing food security problems is not a very important factor that small-scale farmers consider when deciding to produce tobacco under contract or independently. Other perceptions which were found not to play a huge role include the perception that contract farming increased access to technology and skills development in the form of new production techniques. This perception was ranked 12<sup>th</sup> with a score of 12. It was within the study's interest to determine if small-scale farmers believed contract farming would offer training and assistance in crop production, soil and water management and other agricultural economics techniques for example record keeping of inputs and outputs. As mentioned by Glover (1987), it is often believed that private agribusiness will offer technology more diligently than government agricultural extension services.

Since it has a direct economic interest in improving farmers' production. However, only a few respondents agreed with this perception implying that they did not believe contract farming would increase access to technology and skills development. These results differ from those of Glover (1987) probably because the contracting companies' extension officers did not go a step further in instilling some of these skills like record keeping of inputs and outputs to their farmers. A general perception against contract farming is that it increases production costs as inputs are offered at higher prices leading to a reduction in profits. On the other hand, the increase in production costs can be offset by better yields and prices offered for quality products on the market. Respondents were thus asked to reveal if they thought contract farming is profitable. A significant percentage of respondents did not agree with this perception (Rank 11 with a score of 22). There is also a general belief that contract farming is associated with farmers' loss of autonomy since farmers operate under a centralized control system which reduces the contracted farmer to more than a hired hand. According to Prowse (2008), contract farming can even result in farmers losing flexibility in enterprise choice. Respondents were asked to reveal if they thought contract farming leads to a loss of autonomy. The majority of respondents did not agree with this perception (ranked 10 with a score of 50).

**Overall Perception of Small-Scale Farmers on Tobacco Contract Farming:** Based on the responses of the farmers on the ranked perceived advantages and disadvantages of tobacco contract farming in Zimbabwe an overall perception was established for the farmers. The findings are presented in table 5 below.

**Table 5: Overall Perception of Small-Scale farmers on Tobacco Contract Farming**

Perception	Frequency	Percen
Negative	46	38.3
Average	14	11.7
Positive	60	50.0

**Source:** Survey data (2013).

Overall, 50% of the respondents had a positive perception of tobacco contract farming, 38.3% had a negative perception and 11.7% had an average perception. Table 6 shows the mean overall perception for the farmers who participated in tobacco contract farming and those who did not.

**Table 6: Farmers' Overall Perception in Relation to Participation in Contract Farming**

Participation in Contract Farming		N	Mean	Std. Deviation	Std. Error Mean
Perception Score	No	60	3.70	2.438	.315
	Yes	60	1.47	2.354	.304

Source: Survey Data (2013).

The mean perception score for farmers who did not participate in tobacco contract farming was 3.70 whereas the mean perception score for farmers who participated was 1.47. In order to establish if there is a statistical difference in mean perception score between the farmers who participated in tobacco contract farming and those who did not participate the independent samples t-test was carried out. The findings are presented in table 7.

**Table 7: Independent Samples T-Test**

		Levene's Test for Equality of Variances		T-test for Equality of Means						
		F	Sig.	t	DF	Sig. (2-tailed)	Std. Error Difference	95% Confidence Interval of the Difference	Lower	Upper
Perception Score	Equal variances assumed	.113	.737	5.105	118	.000	2.233	.437	1.367	3.100
	Equal variances not assumed			5.105	117.856	.000	2.233	.437	1.367	3.100

Source: Survey Data (2013).

The t-test indicated that there is a significant difference in perception score between participants and non-participants of tobacco contract farming schemes ( $p < 0.05$ ). Based on table 6, on average, the farmers who were not participating in tobacco contract farming schemes had a more positive perception of these schemes while those who participated had a more negative perception of tobacco contract farming. From the evidence gathered on the state of tobacco contract farming in the Marondera rural district, a number of grievances were raised by some participants. The main issues of concern were the untimely delivery of production inputs by some tobacco contract companies and the exclusion of the farmers in drawing up the contracts. This has resulted in the despondency of most farmers with the conditions of their contracts resulting in some terminating or wishing to stop producing their tobacco under contract. This implies that a lot still needs to be done by the contracting companies to improve the contractual arrangements. This will go a long way in improving their perception of the schemes to avoid and reduce termination of these contract arrangements for the benefit of both parties.

## 5. Conclusion and Recommendations

**Conclusion:** Different perceptions with regards to tobacco contract farming indeed exist among small-scale tobacco producers in Marondera rural district. In general, small-scale farmers in the area believed that contract farming makes it possible for the majority of farmers to venture into the production of high-value crops as it provides access to the much-needed markets while reducing the risk of price fluctuations. They also believed that contract farming is not profitable although they have a strong conviction that it does not lead to food security problems. However, majority of the respondents believe that the legal framework when it comes to contract farming is weak and this usually leads to the manipulation of farmers. The overall

perception of tobacco contract farming differs significantly between participants and non-participants. Non-participants had a more positive perception of contract farming arrangements compared to participants.

**Recommendations:** Although a number of farmers have a generally positive perception with regards to tobacco contract farming, a lot still needs to be done to convince the farmers with a negative perception of tobacco contract farming arrangements. Of particular concern is the belief by the majority of the small-scale tobacco producers that contract farming arrangements are not profitable. In this regard, the paper recommends that awareness programs be held by the contract companies where they educate and provide information to farmers on the benefits of tobacco contract farming including gross margin comparisons so that the farmers can weigh their options and decide accordingly. A weak legal framework coupled with a general lack of information on the part of the farmers leaves the contractors with more market power which can lead the farmers to be easily manipulated. The government of Zimbabwe should therefore come up with measures and regulations which compel the contractors to provide information to the farmers without hiding any to sustain their power. From the empirical findings, non-participants had a more positive perception of contract farming arrangements compared to participants. The implication is that gains associated with tobacco contract arrangements are not always apparent to farmers while the disincentives may be more visible. It is therefore fundamental that contract companies try by all means to address some of the shortcomings existing in these contractual arrangements as well as make it a point to try and change the perception of the farmers to develop mutually beneficial relationships with their major stakeholders. Another policy and research implication are that more studies related to the perception dimension towards tobacco contract farming schemes need to be undertaken and there should be a shift from merely quantifying the benefits of the contract arrangements.

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## Determinants of Mandatory Disclosure for Local Government Financial Statements

Afifah Muawanah & Ermawati  
Universitas Pembangunan Nasional Veteran Jakarta, Indonesia  
ermawati@upnvj.ac.id

**Abstract:** This study sought to objectively investigate the impact of local government financial disclosure levels on the amount of income in the municipality, general allocation fund, number of local parliaments, and human development index (LKPD). All financial accounts from local governments in Indonesia make up the study's population. 455 district/city administrations across the island of Sumatra were used as the purposive selection sample for this study from 2017 to 2019. In this work, multiple linear regression analysis with STATA version 16 is used for hypothesis testing. The level of disclosure of LKPD is unaffected by the income level of the municipality or general allocation funds, according to the examination of the data. While having an impact on the level of disclosure of local government financial statements (LKPD) are the number of local parliaments and the human development index. This study offers data on variables that will impact the amount of disclosure in financial statements for local governments. A higher level of disclosure will signify that local governments are managing their finances with a high degree of accountability and openness.

**Keywords:** *Income Level in Municipality, General Allocation Fund, Number of Local Parliaments, Human Development Index, Disclosure.*

### 1. Introduction

The decentralized management of public finances has been impacted by Indonesia's reform process. The regional autonomy strategy has been successful since 2002 by shifting the pattern from centralization to decentralization, which has resulted in a change in the concept of balance from finances handled by the central government to decentralization in each region (Karianga, 2016). Every level of the bureaucracy in Indonesia is promoting a good governance agenda (Sinaga, 2013). Regulations governing state finances as stated in Law Number 17 of 2003, rules governing the state treasury based on Law Number 1 of 2004, and regulations pertaining to audits of management and responsibility for state finances as stated in Law Number 15 of 2004 all served as markers for this period. This law was created as a financial management guideline for both national and local governments. The five stages of management and responsibility of state finances are represented by five government indicators.

According to Law Number 17 of 2003, the state's financial management comprises planning, controlling, using, supervising, and holding accountable actions. Government Accounting Standards are used to provide information on Local Government Financial Reports (LKPD) in compliance with the appropriate accounting standards (SAP). The former regulation, Government Regulation (PP) Number 24 of 2005, was replaced by Government Regulation (PP) Number 71 of 2010, which mandates SAP as the foundation for accrual accounting to enhance the quality and accountability of government performance (Aswar & Saidin, 2018). The full implementation of this SAP accrual-based implementation plan will begin in 2015 for local governments and ministries or agencies (State, 2015). By indicating the delivery of pertinent and trustworthy information, SAP is utilized as a guide for the production and presentation of a financial statement that is completely disclosed. In various LKPDs in 2019, the Supreme Audit Agency (BPK) came across a number of non-compliance issues and internal control deficiencies (BPK, 2020).

Therefore, to assess LKPD's compliance with SAP and local government regulations, BPK expresses issues about the fairness of the presentation of the financial statements in the form of an opinion. Only 541 (99 percent) of the 542 LKPDs in the 2020 Summary of Provisional Examination Results (IHPS) of the 2019 LKPDs have been submitted to the BPK. From 58 percent in 2015 to 90 percent in 2019, WTP opinion increased by 32%. Additionally, TMP opinion dropped by 4% from 5% in 2015 to 1% in 2019, a loss of 4%. In accordance with the Development National Medium Term for 2015–2019, this opinion's achievement has surpassed the performance goal. Additionally, BPK communicated the issue of presenting accounts that did not adhere to SAP in IHPS I 2020 and/or the lack of adequate evidence was not noted in the 2019 LKPD, namely 19 local governments linked to current assets (14 percent) and 39 local governments connected to



fixed assets (30%), 21 local governments related to other assets (16%), 3 local governments related to long-term obligations (2%), 6 local governments related to short-term obligations (5%) and 2 local governments related to revenue (2%).

15 local governments related to operating expenses (11%) and 19 local governments related to capital expenditure (14%) as well as another account (1%). A presentation of complete financial statements that can be included in the financial statements and Notes to Financial Statements is disclosure based on PP No. 71 of 2010 (CaLK). According to Wulandari and Atmini (2012), there are two types of disclosure for financial statements: mandated disclosure and optional disclosure (Wlandari & Atmini, 2012). Several earlier academics have looked at the research on financial statement transparency. In a related study on disclosure, Serrano-Cinca et al. (2009) looked at the elements that could influence the Spanish local public administration's decision to post financial information online. Local public administration in Spain has a 49 percent disclosure rate. Additionally, 82.7 percent of reports are disclosed on the island of Sumatra, according to Marsella and Aswar (2019). The average disclosure for Arifin (2018) in Indonesia is 64.6 percent and for Hariyani et al. (2022) in Sumatera Island, the average is 84 percent. The average amount of financial statement disclosure according to more research by Gusnaini et al. (2020) is 80.42 percent. According to Handayani et al. (2020), 29.9% of LKPD disclosure occurs. This demonstrates that the LKPD has not fully disclosed the disclosure items that must be provided in the LKPD and that it is still low. The degree of income in a municipality may influence whether financial accounts for local governments are disclosed.

Residents need public services and more information to make sure that resources are managed responsibly when local communities' incomes rise (Baldissera et al., 2020). The General Allocation Fund Factor also has an impact on the LKPD disclosure level. Fund for broad purposes or Fund for general purposes. The results of research on general allocation funds conducted by Arifin (2018) indicate that there is a beneficial impact on LKPD disclosure because local governments are under more pressure to make more disclosures in financial statements the higher the level of general allocation funds. Another element that influences the degree of LKPD disclosure is the number of local parliaments. The Regional People's Representative Council (DPRD) is a part of the council that serves as the Indonesian government's legislative body (Gusnaini et al., 2020). DPRD has the necessary expertise in financial reporting to fulfill the oversight role of local governments and make them more compliant in disclosing regional financial statements in accordance with accepted standards (Hardiningsih et al., 2019). The human Development Index is yet another determining factor. The human development index gauges a person's level of development using the primary elements of their quality of life (Setyowati, 2016). A high human development index will increase public knowledge of government performance, making the government more responsible for disclosing financial statement outcomes with full disclosures (Arifin, 2018).

## 2. Literature Review and Hypothesis Development

**Agency Theory:** Leads to an agency relationship based on an agreement between one or more (principals) offering a mandate by involving other individuals (agents) to deliver specific services based on an agreement with the delegation of authority in making the best decision to the agent (Jensen & Meckling, 1976). The regional autonomy strategy has changed the fundamental relationship between the executive and the legislative in public sector organizations (Latifah, 2010). The People's Representative Council (DPR), the Regional People's Representative Council (DPRD), and the Regional Representative Council (DPD) are the principal and the local government (executive) is the agent in this situation, respectively, in representing the community. Because they have access to more data, executives act as agents who want to maximize utility (self-interest) in relation to the creation of the APBD budget (information asymmetry).

**Institutional Theory:** Explains that organizations change their structural makeup in response to institutional influences (DiMaggio & Powell, 1983). Three isomorphism processes—coercive, mimetic, and normative—are distinguished as types of isomorphism. When one institution depends on another that has more clout and presses for changes, this is known as coercive isomorphism, which can be formal or informal (DiMaggio & Powell, 1983). Political influence and concerns with legitimacy are the root causes of coercive isomorphism. Mimetic isomorphism is a strategy used by organizations to copy the success and legitimacy of rival organizations. Pressure from professional groups looking for adoption practices that should be followed

is known as normative isomorphism. According to a prior study, which is based on research by Marsella and Aswar (2019), the income level in a municipality has a considerable beneficial impact on the amount of disclosure of LKPD.

Because residents of high-income areas put more pressure on local governments to disclose information. Iszardani and Hardiningsih (2021) demonstrate that general allocation funds have a favorable impact on the level of LKPD disclosure through the website. Because local governments are required to adequately disclose LKPD information in accordance with applicable standards more dependent they are on transfers from the central government. According to Handayani et al. (2020), there is a strong correlation between the size of the legislature and the disclosure of LKPD since legislatures with a lot of members can exert more influence over local governments. Furthermore, Setyowati (2016) demonstrates that HDI has a positive and significant impact on LKPD disclosure because rising public expectations for comprehensive and precise LKPD disclosures are a result of the increased community progress demonstrated by the degree of human development.

**Hypothesis and Conceptual Framework:** The following is how the study's hypothesis, which may have an impact on how much information is disclosed in local government financial accounts, is formulated.

**Income Level in Municipality and The Level of Disclosure in Local Government Financial Statement:** The average level of community income in a municipality serves as a measure of the improvement in the well-being of its residents. According to institutional theory, the central government can exert stringent oversight over local governments and the higher the level of income per capita, the more coercive pressure the central government applies to local governments to release public and accountable financial reports. The public monitors politics more intensely in high-income cities, and the demand for information on the city's performance indicators is rising (Styles & Tennyson, 2007). The income level in a municipality has a strong beneficial impact on the amount of disclosure of local government financial accounts, according to research from (Marsella & Aswar, 2019) and (Marian & Utami, 2019).

**H1:** The level of disclosure in the financial statements of local governments is significantly positively correlated with the income level in the municipality.

**General Allocation Funds and The Level of Disclosure in Local Government Financial Statement:** The general allocation fund (DAU) is a method of putting decentralization into practice by allocating funds for a fair distribution of fiscal capacity among regions. According to agency theory, there is a connection between the local government, which serves as the agent, the principal (the central government) and the community. In accordance with allocations established by the federal government, local administrations are tasked with handling regional funds obtained from the general populace. As a result, local governments must be held accountable for the use of funds by providing information in financial reports sent to the federal government and the general public. General allocation funds are said to have a considerable favorable impact on the level of disclosure of local government financial accounts in studies by Arifin (2018) and Iszardani and Hardiningsih (2021).

**H2:** The level of disclosure in local government financial statements is significantly positively correlated with general allocation funds.

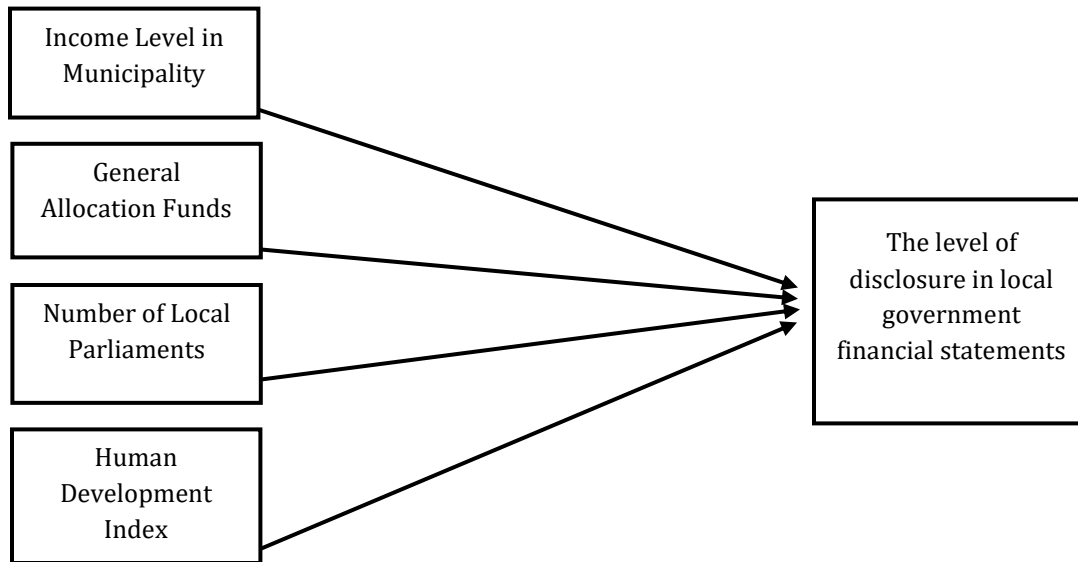
**Number of Local Parliaments and the Level of Disclosure in Local Government Financial Statement:** The DPRD is the legislative body in charge of monitoring the administration of regional budgets by local governments (Nurlianto & Aswar, 2020; Gusnaini et al., 2020; Aswar et al., 2022). Council members are thought to be knowledgeable enough to direct local governments to be more compliant with revealing financial information about them (Hardiningsih et al., 2019). According to institutional theory, DPRD members can keep an eye on budgetary allocations and put pressure on local governments to disclose in great detail how the budget was actually used. The number of local parliaments has a considerable favorable impact on the amount of disclosure of local government financial accounts, according to research by Handayani et al. (2020) and Aswar et al. (2021).

**H3:** The level of disclosure in local government financial statements is significantly influenced favorably by the number of local parliaments.

**Human Development Index and the Level of Disclosure in Local Government Financial Statement:** A high human development index indicates that local governments have been successful in advancing the community, particularly in terms of the community's quality of life (Utami & Sulardi, 2019). According to the agency hypothesis, there is a connection between the community acting as the principal and the local government functioning as an agent. Local governments must be accountable for the outcomes of financial reports with full disclosure because communities with proper education and welfare will actively participate in assessing the viability of local government operations. The human development index has a considerable favorable impact on the level of disclosure of local government financial accounts, according to Arifin (2018), Setyowati (2016) and Utami & Sulardi (2019).

**H4:** The level of disclosure in local government financial statements is significantly influenced positively by the human development index.

**Figure 1: Research Framework**



### 3. Research Methodology

This study focuses on LKPD, the district and municipal governments of Indonesia that have undergone BPK audits. The district and city administrations on the island of Sumatra in the 2017–2019 budget years make up the research population and are the source of the study's object. BPK has audited 154 LKPDs across the island of Sumatra, collecting a total of 462 samples in the process. Additionally, using the purposive sampling technique, the population is filtered to create the study's final sample according to the following standards:

- a) BPK audited the LKPD (district/city) on the island of Sumatra from 2017 to 2019.
- b) Deliver LKPD components, including cash flow reports, CaLK, operational reports, budget realization reports, balance sheets, reports of changes in equity, and reports on changes in excess budget balances.

The data used in this study were the LKPD for both the Regency and the City on the island of Sumatra in the years 2017 through 2019. They were gathered from the central BPK's official website, [www.e-ppid.bpk.go.id](http://www.e-ppid.bpk.go.id), as well as the official websites of the relevant agencies and the central statistics agency.

**Table 1: Measurement of Variables**

Variable	Measurement	Source
The level of disclosure in local government financial statements	Measured using a scoring system based on 50 disclosure items based on the government compliance index.	Marsella and Aswar (2019)
Level Income in Municipality	Measured by comparing the amount of gross regional domestic product with the total population of the area.	Marsella dan Aswar (2019)
General Allocation Fund	Measuring based on general allocation funds compared to total revenue in an area.	Iszardani and Hardiningsih (2021)
Number of Local Parliaments	Measured using the number of DPRD members in an area.	Hardiningsih et al. (2019)
Human Development Index	Measured based on the total human development index score in the area.	Arifin (2018)

#### 4. Results and Discussion

The participants in the study are from Sumatera Island's Regency/City. Utilizing purposive sampling methods, samples were chosen. Table 2 displays the study's final sample.

**Table 2: Final Sample of the Study**

Criteria	Total
Local Government Financial Reports (LKPD) from the Sumatran Island that BPK has audited	154
Research Period	3
Number of Sample	462
The regional government financial reports, which have been examined by the BPK in Sumatra, are given insufficiently.	(7)
Total Sample	455

The study population data were filtered as shown in table 2 before the researcher conducted data analysis using the Multiple Linear Regression Analysis with STATA Version 16 software. Descriptive statistics are displayed in Table 3.

**Table 3: Statistical Descriptive Analysis**

	N	Minimum	Maximum	Mean	Std. Deviation
The Level of disclosure in Local Government Financial Statement (DISC)	455	0,66	0,9	0,7973187	0,0459345
Income Level in Municipality (ILM)	455	1,78e+07	2,80e+08	4,75e+07	3,05e+07
General Allocation Fund (GAF)	455	0,0527514	0,7035539	0,4918792	0,1049177
Number of Local Parliaments (Numpar)	455	18	50	32,92967	8,881718
Human Development Index (HDI)	455	59,25	85,07	69,9889	4,617255

According to table 3, the LKPD disclosure level has an average value (mean) of 0.7973187, which is higher than the standard deviation's value of 0.0459345. North Aceh Regency 2017 has a minimum value of 0.66. The maximum value, which is 0.90, is found in the Pelalawan Regency during 2017–2019. The mean value of the variable describing the income level in a municipality is 47,467,510,10421, which is higher than the standard deviation of 30,498,186.42283. The variable's maximum value is 280,252,287,99938, while its minimum value is 17,796,369,3960. The general allocation fund variable has a mean value of 0.4918792 and a maximum value of 0.7035539 and a minimum value of 0.0527514, both of which are lower than the standard deviation value of 0.1049177. With a maximum value of 50 and a minimum value of 18, the number of local parliaments has a mean value of 32.92967, which is less than the standard deviation of 8.881718. The average value of the human development index is 69.9889, with a standard deviation of 4.617255 and a minimum value of 59.25, a maximum value of 85.07.

**Table 4: Partial Regression Results**

Variable	Coefficient	Regression Model		Hypothesis Prediction	Conclusion
		Fix Effect Model			
		t	Probability		
(Constant)	0,7936648	50,82	0,000		
ILM	0,0000000000786	0,23	0,815	H <sub>3</sub> : +	H <sub>1</sub> reject
GAF	0,0370763	1,32	0,187	H <sub>4</sub> : +	H <sub>2</sub> reject
Numpar	0,001887	3.10	0,002	H <sub>3</sub> : +	H <sub>3</sub> accept
HDI	0,0082957	3,49	0,001	H <sub>4</sub> : +	H <sub>4</sub> accept

Based on Table 4, which indicates that the test results in a positive value with a t-count of 0.23 and a t-table of 1.645 (0.231.645) and has a T probability value of 0.815 (0.815 > 0.05), it can be concluded that the income level in the municipality does not significantly affect the level of LKPD disclosure. Reject H<sub>1</sub> and accept H<sub>0</sub> in the municipality's variable income level. This study contradicts Marsella and Aswar (2019), who claimed that a municipality's revenue level has a favorable impact on the degree of LKPD disclosure. However, this is consistent with Marian and Utami (2019) finding that the amount of LKPD disclosure in 34 Indonesian provinces is not significantly influenced by the revenue level of the municipality. This indicates that the municipality's high-income level does not subject local governments to more pressure from the federal government, which would affect how the federal government receives the LKPD disclosure items. The general allocation fund variable has a coefficient of 0.0370763, indicating that the test results in a positive value with a t-count of 1.32, a t-table of 1.645 (1.321.645), and a T probability value of 0.187 (0.187 > 0.05), indicating that general allocation funds do not significantly affect the level of LKPD disclosure. Reject H<sub>2</sub> and accept H<sub>0</sub> in the variable for the general allocation fund.

This study disagrees with Arifin (2018), who claimed that general allocation funds have a favorable impact on the degree of LKPD disclosure. However, the findings of this study are consistent with those of Nur and Murwaningsari (2020), who found no relationship between LKPD disclosure and the degree of reliance as measured by general allocation funds. Additionally, according to research by Hardiningsih et al. (2019), the degree of reliance shown by the general allocation fund has no appreciable impact on the level of disclosure of LKPD. This study confirms the findings of other studies since local governments' high levels of LKPD disclosure are unaffected by their high general allocation fund levels. This is because local governments are less inclined to take steps to boost LKPD disclosure because the general allocation funds provided by the central government are not dependent on information disclosed in LKPD. The number of local parliaments has a coefficient of 0.001887, indicating that the test results in a positive value with a t-count of 3.10, a t-table of 1.645 (3.10 > 1.645), and a T probability value of 0.001 (0.002 > 0.05). H<sub>3</sub> and H<sub>0</sub> are accepted in the Number of local parliaments variable. The findings of this study are corroborated by studies by Aswar et al. (2021) and Handayani et al. (2020), which demonstrate the number of DPRD.

A proxy for the size of the legislature has a considerable favorable impact on the disclosure of LKPD. This study validates the findings of earlier studies since more DPRD members will have strong control of all moves local governments take to manage regional finances, improving the district/city governments' ability to communicate financial information clearly and understandably, raising the amount of transparency in the financial statements that district/city local governments present. The human development index variable has a coefficient value of 0.0082957, indicating a positive test with a t-count of 3.49 and a t-table of 1.645 (3.49 > 1.645), and it has a probability value of T. of 0.001 (0.001 > 0.05), indicating that it significantly influences the amount of LKPD disclosure. H<sub>0</sub> is rejected by the human development index variable while H<sub>4</sub> is accepted. According to Arifin (2018), Setyowati (2016), Utami and Sulardi (2019), and others, the amount of LKPD disclosure is significantly influenced positively by the human development index. In other words, this suggests that a higher human development index will reflect the high level of community quality and the level of community participation in enticing local governments to enhance regional financial management, which will affect improving LKPD transparency.

## 5. Conclusion and Recommendations

This study investigates the impact of municipal revenue levels, general allocation funds, the number of local parliaments, and the human development index on the degree of district/city LKPD disclosure. The amount of LKPD disclosure is not significantly impacted by the income level in the municipality variable, according to the findings of the study provided in the preceding chapter. This demonstrates that just because a municipality has a high amount of money does not necessarily mean that the central government has a high level of control over local governments, putting local governments under less pressure to reveal LKPD. The amount of disclosure of LKPD is not significantly impacted by general allocation funds. This demonstrates that the central government's high general allocation transfers are not dependent on the accuracy of the information provided in LKPD, which deters local governments from taking steps to boost LKPD disclosure. The quantity of local parliaments significantly and favorably affects the degree of LKPD disclosure. For local governments to improve the delivery of financial information transparently and increase the level of disclosure of LKPD presented to the government, a growing number of local parliaments, which are proxied by an increasing number of DPRD members, will have high supervision of every action taken by local governments in managing finances.

The level of LKPD disclosure is significantly and favorably influenced by the human development index. This demonstrates that a greater human development index will reflect the high level of community quality and level of community involvement in enticing local governments to enhance regional financial management, affecting improving LKPD disclosure. The analysis of data from some local government financial reports, which are presented by local governments but have displays with low-resolution levels that make it difficult, is one of the constraints of this study. Furthermore, there are financial reports from the district and city governments that lack the necessary information. As a result, the research sample does not include certain districts or cities, which reduces the amount of data in the study. To understand the variability in the degree of disclosure of LKPD in Indonesia, additional research is anticipated to examine the level of disclosure in Indonesia using a longer time frame. Future researchers should also employ a wider sample of local governments to provide more thorough and reliable data. Other factors, such as those used by Baldissera et al. (2020), are related to socioeconomic factors in the form of population, educational attainment, and region related to finances.

Budgetary factors in the form of capital investment, and related political-electoral factors in the form of political competition, can be used in further research. Local governments can optimize the level of disclosure offered in accordance with the relevant SAP, particularly in regencies/cities on the island of Sumatra. One way that local governments can use information technology to promote transparency in LKPD disclosure is by making information available to the general public on the local government's official website. Additionally, the central government should be able to maximize the execution of monitoring by, for example, designating a certain period for monitoring and evaluating local government financial management and the transfer of monies from the central government to them in Sumatra Island.

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**Sustaining the Township Economy: An Investigation into the Factors Influencing the Shopping Experience of Spaza Shop Customers in South Africa**

Marlé van Eyk, Felix Amoah & Thembelihle Yase  
Nelson Mandela University, South Africa

Marle.vanEyk@mandela.ac.za, Felix.Amoah@mandela.ac.za, s214210588@mandela.ac.za

**Abstract:** The township economy supports many South Africans by creating employment and reducing the socio-economic challenges facing the country. To ensure sustainable growth of the sector, research is required on key businesses within the informal economy. This study empirically investigated the factors influencing the shopping experience of spaza shop customers in South Africa. Spaza shops, an under-researched South African context, continue to expand in various townships and serves as retail outlet where consumers purchase their daily products and services. The study embraced a quantitative research design. A self-administered questionnaire was employed to collect the data for the study. The target respondents include customers who were older than 18 years and had previously purchased from spaza shops. Respondents were selected using convenience sampling. The questionnaires were distributed to six townships in South Africa. 185 usable questionnaires were included in the data analysis. The empirical results provided evidence that supports the existence of statistically significant positive correlations between five independent experience factors, namely: esthetic, distinctiveness, cognitive, affective and social; with customer experience (dependent variable). Additionally, three of the five experience factors (social, affective and cognitive) are significant predictors of customer experience in the context of this study. Based on the identified factors, several recommendations are made for improving customer experience in a spaza shop context. Recommendations made are expected to enhance the competitiveness of spaza shops thereby enabling them to increase their contribution to employment creation and national Gross Domestic Product.

**Keywords:** *Shopping experience, Spaza shops, Township economy.*

## 1. Introduction

Spaza shops in South Africa (SA) were conceived in the 1970s and since then, have grown to become the backbone of the SA township economy (Jeeva, 2017). Research suggests that the proportion of SA customers who shop at spaza shops has grown from 45% to 53% between 2016 and 2017 and during the same period, sales grew by 13.4% (Mannak, 2018). The upward growth trend indicates that customer interest in purchasing products and services from spaza shops is growing, increasing the number of spaza shops. Although there has been an increase in the number of customers purchasing products and services from spaza shops (Mannak, 2018), the experience of customers during their purchase activity has not received much attention. Prior research on spaza shops focused mainly on a comparison between the performance and challenges of foreign and domestically owned spaza shops, and management strategies that can be used by spaza owners to grow the number of spaza shops (Liedeman, Charman, Piper, & Petersen, 2013; Perks, 2010; Tengeh & Mukwarami, 2017; Mukwarami, Tengeh, & Iwu, 2018). It is acknowledged that customer behavior towards shops that sell products and services is changing.

Because of the emergence of technology and social media (Holmgren & Olofsson, 2015), resulting in customers now being constantly connected and informed (Khaas, 2017). The latter leads to a rapid increase in the expectations and demands of customers and will continue to do so in the future (Khaas, 2017). At the same time, customers desire experiences that engage them in an emotional, physical and intellectual manner (Bagdare & Jain, 2013). Customers are further attracted to shops that provide stimulating and engaging experiences (Holmgren & Olofsson, 2015). The focus, thus, turns to how spaza shops can build these experiences with their customers. The dynamic behavior of customers requires spaza shops to seek marketing strategies to grow (Moloi, 2014; Perks, 2010) and remain competitive in the informal sector. In support of this view, researchers believe that spaza owners need to be equipped with the necessary skills to manage their spaza shops successfully (Jeeva, 2017; Perks, 2010). Taking into account that providing an exceptional customer experience may be an avenue for businesses (in this context spaza shops) to differentiate themselves from their competitors (Radder, van Eyk, & Koekemoer, The off-line retail experience: A suggested integrated framework, 2019).

This study suggests a need to investigate the factors that influence the experience of customers who purchase products and services from spaza shops. Understanding the factors that influence a customer experience in spaza shops will assist to enhance the experience that spaza shops offer to remain competitive in the informal sector. This study was conducted to fill this knowledge gap by identifying the factors that influence the customer experience at spaza shops. To achieve this aim, the objective of the study was to identify factors influencing the shopping experience of spaza shop customers.

## 2. Contextualising the Shopping Experience of Spaza Shops

**Spaza Shops:** Spaza shops are part of the township economy or the informal sector in SA (Tengeh & Mukwarami, 2017; Van Scheers, 2016), which by nature, do not legally exist and comprise unregistered entities (Basardien, Parker, Saheed, Friedrich, & Appoles, 2014; Coetzer & Pascarel, 2014). Nonetheless, the informal sector provides employment for a substantial number of people (Phalatsi, 2016) and contributes significantly to poverty alleviation (Basardien, Parker, Saheed, Friedrich, & Appoles, 2014; Cichello & Rogan, 2017; Perks, 2010). Over 2.5 million people in SA are employed in the informal sector (Rogan & Skinner, 2018). Of this number, 61% are self-employed (business owners) and 39% are employees (Cichello & Rogan, 2017). The South African informal sector contributes between 6% - 12% of the Gross Domestic Product (GDP) (Cichello & Rogan, 2017; Fourie & Skinner, 2018). In SA townships, reducing poverty and unemployment is still a challenge (Hare & Walwyn, 2019; Sekhampu, 2012). The dominant forms of informal township business include enterprises within the health services (traditional healers and medicine), street vendors, haircare, educare (creches), liquor retailers and spaza shops (Charman & Petersen, 2018). Liquor retailers, haircare, and spaza shops had the greatest market share of 19%, 7%, and 15%, respectively (Charman & Petersen, 2018).

The 15% market share of the spaza shops points to their significance, hence the objective of this study, to identify the factors that influence the customer experience in spaza shops, spaza shops will now be examined. The term 'spaza' shop is used in reference to businesses that mimic formal grocery shops and supermarkets but has limited functioning (Spiegel (2002) in Mukwarami, 2017; Van Scheers, 2016). Spaza shops are common in many townships, and sell a limited selection of products and services to customers in the township (Hare & Walwyn, 2019; Mukwarami, Tengeh, & Iwu, 2018; Zanker & Moyo, 2020), including electricity, airtime, cold drinks, milk, sweets, chips, frozen meats and paraffin (Charman & Petersen, 2018; Coetzer & Pascarel, 2014; Mukwarami, Tengeh, & Iwu, 2018; Mutlane, 2017; Phalatsi, 2016; Van Scheers, 2016). Spaza shops normally operate from a house, residential stand, corrugated iron sheet structures or decommissioned container (Basardien, Parker, Saheed, Friedrich, & Appoles, 2014; Lamb, Kunene, & Dyili, 2019; Van Scheers, 2016), and vary in size, format and in the experience that they offer to their customers (Coetzer & Pascarel, 2014). In some spaza shops, customers are served through a small window-like opening while they wait outside the shop (Charman, Bacq, & Brown, 2019; Chipunza & Phalatsi, 2019; Mukwarami, 2017).

While in others, customers are serviced inside the spaza shop (Basardien, Parker, Saheed, Friedrich, & Appoles, 2014; Coetzer & Pascarel, 2014). SA, because of its vibrant economy (Mukwarami, Tengeh, & Iwu, 2018), is one of the most attractive countries to live (Sibanda & Stanton, 2020). The attainment of independence in 1994 (Ngcamu & Mantzaris, 2019) saw townships becoming a haven for foreign nationals, especially from the African continent who sought survival and economic opportunities (Basardien, Parker, Saheed, Friedrich, & Appoles, 2014; Mukwarami, Tengeh, & Iwu, 2018). The resulting influx of foreign nationals (Lamb, Kunene, & Dyili, 2019) eventually reflected in the ownership of spaza shops in townships, where ownership was a combination of domestic and foreign ownership (Chipunza & Phalatsi, 2019; Ngcamu & Mantzaris, 2019). Domestically owned spaza shops are typically operated by women as home-based operations (Lamb, Kunene, & Dyili, 2019; Chipunza & Phalatsi, 2019; Sustainable Livelihoods Foundation, 2015a). Unlike local-owned spaza shops that rely on family for labor, foreign-owned spaza shops employ both foreign and local residents as employees (Chipunza & Phalatsi, 2019; Hare & Walwyn, 2019; Sustainable Livelihoods Foundation, 2015a). Spaza shops have also been found to seldom perform marketing functions within their business (Phalatsi, 2016).

This was corroborated by (Van Scheers, 2016) who established that from 1996 to 2016, marketing in the

spaza shops was limited. Moreover, the researcher found that there is a positive relationship between a lack of marketing skills and the business failure of spaza shops (Van Scheers, 2016). This evident lack of marketing skills by spaza shop owners (Van Scheers, 2016) translates to and is associated with low-quality products and poor customer service. A lack of understanding of customer needs (Ligthelm, 2005) and (Van Scheers, 2016). Focus on positive customer experience is thus essential in encouraging customers to support these businesses (Bagdare & Jain, 2013). In view of the above, managers and owners of businesses (in this context spaza shops) need to identify the factors that influence their customers' experience, as this has the potential to assist spaza shops to be more competitive, not only in the spaza shop market but also in the larger informal sector. The section below will briefly describe the concept-customer experience.

**Customer Experience:** This study is founded on the theory of customer experience. Holmgren and Olofsson (2015) describe the term experience as encounters that people have while participating in events that occur in their daily lives. Yakhlef (2015) builds on the description and adds that customer experience emerges as a complex encounter between spatial materials (the physical layout, objects and atmosphere aspects of a store) and social dynamics (cultural, emotional, historical and cognitive aspects of the customer). Furthermore, Bagdare and Jain (2013) suggest that customer experience occurs in the mind of customers which is affected on an emotional, physical and intellectual level. Researchers (Kranzbuhler & Kleijnen, 2018; Yakhlef, 2015) agree that collecting and connecting information from a customer's perspective and a business's perspective leads to a better understanding and management of customer experience. From a business's perspective, customer experience is designed and staged through its processes and systems (Kranzbuhler & Kleijnen, 2018). From a customer's perspective, customer experience considers how customers' reactions, senses, behaviors and feelings are affected by the processes and systems of the businesses that they are exposed to during their experiences (Kranzbuhler & Kleijnen, 2018).

Thus, this perspective suggests that businesses alone cannot determine how much value customers derive from their experiences or how customers view or evaluate their own experiences (Kranzbuhler & Kleijnen, 2018). It is, therefore, important for businesses to take notice of the present customer tastes and preferences, as they are important when customers make their purchase decisions (Brumfield, Adelaja, & Lininger, 1993). Customers are increasingly seeking unique experiences that go beyond just consuming products and services (KPMG, 2018 ; Oh, Fiore, & Jeoung, 2007; Quadri-Felitti & Fiore, 2012). Businesses therefore increasingly need to provide consistently high levels of products and services, leading to the provision of a wider choice of products and services for customers to choose from (Botha & van Rensburg, 2010). This variety of options available makes it difficult for the customers to choose between their options (Oh, Fiore, & Jeoung, 2007), and the experience associated with the purchase then becomes pertinent. To identify the factors that influence customer spaza shopping experience, this study identified preliminary five constructs namely aesthetics, distinctiveness, cognitive, affective, and social based on the models provided by Bustamante and Rubio (2017); Oh et al. (2007); Bagdare and Jain (2013). The literature on the five constructs is discussed below.

**Aesthetic:** Aesthetics become evident when customers feel immersed in an experience (Quadri-Felitti & Fiore, 2012). Aesthetics is associated with the attractiveness and pleasantness of an environment (Oh, Fiore, & Jeoung, 2007), and research indicates that an esthetic experience has a significant relationship with customer experience (Oh, Fiore, & Jeoung, 2007). In an aesthetic experience, people enjoy being at a destination without affecting or changing the nature of the destination that has been presented to them (Lee, Jeong, & Qu, 2020; Yichen, Arcodia, Ma, & Hsiao, 2018), as they are content with just observing the environment as it is (Cassel, 2015; Oh, Fiore, & Jeoung, 2007; Oh, Fiore, & Jeoung, 2007), or passively appreciate the way an environment appeals to their senses (Oh, Fiore, & Jeoung, 2007). For example, in SA, tourists visit Hobie beach in Gqeberha to enjoy the serenity and beauty of the beach, and to observe the constant rhythm of the warm Indian Ocean. In such experiences, tourists do not alter the environment's natural appearance (Oh, Fiore, & Jeoung, 2007). Instead, tourists appreciate the destination according to how their senses have been stimulated by the environment. These elements create a pleasant physical environment or atmosphere for customers.

**Distinctiveness:** Distinct, is presented in the model by Bagdare and Jain (2013) and represents an important contributor to the lifespan of a business (Frederiksen, 2018). Distinctiveness is how well retail environments stand out from competitors in terms of uniqueness and differentiation (Foster & McLellan, 2015; Niu & Wang,

2016; Schmitt, 1999). LaFrance (2009) explains that distinctiveness refers to the tendency to identify offerings as coming from a particular source. For example, individuals or customers can easily identify spaza shops by the distinctive signage or branding that appears on the external wall of the businesses (Sustainable Livelihoods Foundation, 2015a). It is possible for businesses to distinguish themselves through experiences and events that they provide for their customers (Kotler & Keller, 2016) and this provides businesses with an experiential image amongst customers (Bagdare & Jain, 2013).

**Cognitive:** David, Miclea and Opre (2004), from a psychological perspective, describe that cognition is concerned with the human mind, how it creates meaning, how it produces responses and the influence of those responses. Such responses include positive thoughts, memories and ideas about an experience (Bustamante & Rubio, 2017). Nathan (2000) explains that thoughts occur in a person's mind and are responsible for how individuals (customers) interpret something and respond the way that they do to something. When information on events is stored in a person's mind for a specific period it is referred to as a memory (Zlotnik & Vansintjan, 2019). An idea is something a person imagines or pictures in their mind (Claypool, 2017). Together, thoughts, memories and ideas are part of a person's cognitions and can influence a person's attitude towards a particular object or stimulus. In a different study, Gentile, Spiller and Noci (2007) explain that cognition is concerned with how an experience or offering may engage individuals intellectually.

Cachero-Martinez and Vazquez-Casielles (2017), in the context of retail stores, report that intellectual (cognitive) experiences are associated with the ability of a person's mind to stimulate imagination or mental problem-solving skills. Wu, Lee and Liao (2018), in the context of tourism travel agents, explain that cognitive experiences emphasize the customer's thoughts during interactions with travel agents. Bustamante and Rubio (2017), in the context of retail stores, explain that cognitive experiences include mental responses to stimuli in an environment that engages customers creatively. In the context of their study, Bustamante and Rubio (2017) explain that the cognitive factor of customer experience is influenced by the ability of marketing stimuli to make customers reflect, arouse curiosity, awaken creativity and be inspired. When this occurs, customers are absorbed in their experience (Bustamante & Rubio, 2017).

**Affective:** The affective factor is a composition of moods and emotions that customers experience during exposure to stimuli (Bustamante & Rubio, 2017; Gentile, Spiller, & Noci, 2007; Lischetzke, 2014). Moods are an affective state that is comparatively weaker and less stable than emotions and their occurrence is not directed towards a particular object or event (Chavez & Mendez, 2008). In the context of their study in retail stores, Bustamante and Rubio (2017) state that when studying customer experience, it is also appropriate to focus on emotions, as emotions provide retailers with valuable information on their customers' well-being and responses to stimuli during the shopping process. Emotions are a formidable indication of a person's internal affective state when they cognitively evaluate an event, or their own thoughts (Bustamante & Rubio, 2017; Verplanken, Hofstee, & Janssen, 1998; Wang, et al., 2017).

Moreover, the occurrence of emotions is specific and in direct response to objects, people, events or situations (Bustamante & Rubio, 2017; Ekkekakis, 2012; Puccinelli, et al., 2009). Emotions are provoked by something, are reactions to something, and happen because of something (Ekkekakis, 2012). Emotions can be classified as positive or negative (Cachero-Martinez & Vazquez-Casielles, 2017). Positive emotions make individuals feel good (Armenta, Fritz, & Lyubomirsky, 2016), and several researchers (Armenta, Fritz, & Lyubomirsky, 2016; Brun, Rajaobelina, Ricard, & Berthiaume, 2017), consider joy, happiness, interest, amusement and surprise as examples of positive emotions that can be felt by customers. On the other hand, disgust, anger, and fear are considered as examples of negative emotions that can be felt by customers after a service interaction in a store (Armenta, Fritz, & Lyubomirsky, 2016; Reinares-Lara, Rodriguez-Fuertes, & Garcia-Henche, 2019; Roy, Gruner, & Guo, 2020). Thus, in view of the foregoing literature, it is possible to view the affective factor as a possible influencer of the spaza shop experience.

**Social:** In measuring customer experience, one needs to acknowledge that there is an aspect of social experience or interaction in the retail environment. Social interaction is largely the verbal communication that takes place in a social setting (Bales, 1954; Cachero-Martinez & Vazquez-Casielles, 2018) and in a retail context, can be described as the interactions that take place between customers and employees during the

shopping experience (Bustamante & Rubio, 2017; Cachero-Martinez & Vazquez-Casielles, 2018). The latter shifts the focus to the important role of others in customers' experience (Cachero-Martinez & Vazquez-Casielles, 2018). Apart from shopping, research suggests that some other reasons that customers visit businesses are to meet friends, interact with other people and see people (Cachero-Martinez & Vazquez-Casielles, 2018).

In other words, customers enjoy and look forward to socializing with each other and with store employees whilst shopping (Lemon & Verhoef, 2016). For customers, being advised, understood and heard by employees and other customers is important (Bustamante & Rubio, 2017; Cachero-Martinez & Vazquez-Casielles, 2018) and leads to a positive social experience when customers experience the latter from employees and other customers (Cachero-Martinez & Vazquez-Casielles, 2018). Therefore, businesses need to ensure that their employees are friendly, informative and can maintain social relationships with customers (Bustamante & Rubio, 2017). Based on the above, the social factor is important and needs to be considered when measuring the shopping experience of customers.

Informed by the foregoing discussion, the following research hypotheses are formulated for the study.

**H1:** There is a significant relationship between the esthetic factor and customer experience of the spaza shop.

**H2:** There is a significant relationship between distinctiveness factor and customer experience of spaza shop.

**H3:** There is a significant relationship between the cognitive factor and customer experience of spaza shop.

**H4:** There is a significant relationship between the affective factor and customer experience of spaza shop.

**H5:** There is a significant relationship between the social factor and customer experience of spaza shop.

### 3. Research Methodology

A descriptive research design was selected for this study, followed by a quantitative research methodology. Primary data was collected using a survey in the form of a self-administered questionnaire. The target population for this study was customers who are older than 18 years and who had bought grocery items (products and services) in spaza shops located in six townships within Nelson Mandela Bay in South Africa. Specifically, the townships include Walmer Township, KwaZakhele, Zwide, Motherwell, KwaMagxaki and New Brighton. A non-probability sampling method and convenience sampling technique were used to distribute the self-administered questionnaires. The minimum sample size required for this study was 150 customers based on calculations which suggest that 6 x number of variables multiplied by 5 x items (O'Rourke & Hatcher, 2013) multiplied by 5 x respondents (Osborne, 2014). However, a total of 200 questionnaires were distributed and collected. As the data collection process took place in 2021, it is important to mention the Covid 19 measures that have been implemented to safeguard both the researcher and respondent during the data collection phase of this study.

In this regard, a mask and gloves were worn at all times by the researcher. The prescribed social distance of 1.5 meters was adhered to when recruiting respondents. Spaza shop customers (respondents) not adhering to the regulation of wearing a mask were not approached for possible participation. The clipboard (containing the self-administered questionnaire) and pen (used by respondents to fill in data on the questionnaire) were disinfected with a disinfectant spray after use by every respondent; and upon completion, respondents dropped the populated questionnaire in a box supplied by the researcher. This box was only opened by the researcher once the data collection had been completed. Once the data collection phase was completed, the data from the questionnaires were recorded, coded, and cleaned on a single excel spreadsheet. After the latter was done, a total of 185 questionnaires were deemed useable and considered for data analysis, which was conducted with the aid of IBM SPSS Statistics version 27 (computer software). The data collection process took place after obtaining ethical clearance from the university. Respondents voluntarily participated in the study. Furthermore, only respondents who signed a consent form were allowed to participate in the study.

#### 4. Results

**Demographic Information of Respondents:** The demographic details of the respondents are presented in Table 1. The results indicate that the largest proportion (56.2%) of respondents were male while 42.2% were female. Over a third (40.0%) of the respondents were 19 – 24 years age group, while those between 45 – 54 and 55 – 64 years accounted for 4.3 % of the responses. Respondents were sampled from New Brighton, KwaMagxaki, Zwide, Motherwell, KwaZakhele and Walmer townships; with each township accounting for 19.5%, 18.9%, 15.7%, 15.1%, 14.6% and 11.9% of responses, respectively.

**Table 1: Demographic Information of Respondents**

Item		Count	%
<b>Gender</b>	Males	104	56.2
	Female	78	42.2
	Not willing to say	2	1.1
	No response	1	0.5
	TOTAL	185	100
<b>Age</b>	19 – 24	74	40.0
	25 – 34	60	32.4
	35 – 44	30	16.2
	45 – 54	8	4.3
	55 – 64	8	4.3
	65 +	3	1.6
	No response	2	1.2
	TOTAL	185	100
	<b>Township</b>	Walmer Township	22
KwaZakhele		27	14.6
Zwide		29	15.7
Motherwell		28	15.1
KwaMagxaki		35	18.9
New Brighton		36	19.5
No response		8	4.3
TOTAL		185	100

**Validity Test:** A confirmatory factor analysis (CFA) was used to confirm construct validity (Randall & Jung, 2018). Table 2 below presents various CFA and goodness of fit indices, all of which meet the minimum thresholds for the validity of a factor structure as recommended by Randall and Jung (2018) and Dilbeck (2018). As shown in the Table 2, CMIN/DF (0.185 - 2.681); CFI (0.967 - 1.000); and SRMR (0.0042 – 0.425) values met the thresholds for acceptability. However, with regards to the RMSEA, only distinctiveness (RMSEA = 0.000) and cognitive (RMSEA 0.064) met the suggested threshold of less than 0.08 (Dilbeck, 2018). Nonetheless, Hart (2019) posits that the RMSEA values for esthetic, affective, social and customer experience are less than the 0.10 threshold and thus acceptable. On the whole, the CFA showed reasonably acceptable validity for each factor. The above results indicate the high validity of all the measures used in this study.

**Table 2: CFA - Goodness-of-Fit Indices for Factors**

Experience Factor	CMIN/DF < 3	CFI > 0.95	SRMR < 0.05	RMSEA < 0.08
Esthetic	1.473	0.980	0.0425	0.097
Distinctiveness	0.185	1.000	0.0042	0.000
Cognitive	1.753	0.985	0.0353	0.064
Affective	2.241	0.977	0.0353	0.082
Social	2.681	0.967	0.0357	0.096
Customer experience	2.377	0.970	0.0326	0.087

**Reliability Test:** A Cronbach alpha analysis was conducted to establish the reliability of the constructs in the study. Only those factor items with a minimum Cronbach alpha coefficient of 0.7 (Nunnally, 1978 in O'Rourke & Hatcher, 2013) and a minimum item correlation score of 0.4 (Xiao & Dasgupta, 2022) were deemed to be reliable and acceptable. Table 3 shows all factors were thus accepted and retained as part of the spaza customer experience factor structure. Cronbach alpha coefficient scores for all factors are high and above the 0.7 threshold (Nunnally 1978 in O'Rourke & Hatcher, 2013).

**Table 3: Cronbach Alpha Results**

Experience Factors	Number of Items	Cronbach Alpha Score
Esthetic	6	0.873
Distinctiveness	4	0.831
Cognitive	6	0.853
Affective	6	0.863
Social	6	0.857
Customer experience	8	0.892

**Correlation Analysis and Hypothesis Testing:** Pearson's correlation analysis (see Table 4) was used to measure correlations between the variables as hypothesized in the study. The results show a steady pattern of significant positive correlations between each of the independent variables with the dependent variable, customer experience. Based on the work of Cassel (2015) and Mumaka (2012), social ( $r = 0.725$ ;  $p < 0.01$ ) has the strongest correlation with customer experience, followed by affective ( $r = 0.708$ ;  $p < 0.01$ ). Esthetic ( $r = 0.640$ ;  $p < 0.01$ ), cognitive ( $r = 0.614$ ;  $p < 0.01$ ), and distinctiveness ( $r = 0.521$ ;  $p < 0.01$ ) have a moderate positive correlation with customer experience.

**Table 4: Pearson's Product Correlation Results**

	Aesthetic	Cognitive	Affective	Distinctiveness	Social	Customer Experience
Aesthetic	1	0.546**	0.703**	0.694**	0.585**	0.640**
Cognitive		1	0.673**	0.441**	0.522**	0.614**
Affective			1	0.541**	0.652**	0.708**
Distinctiveness				1	0.506**	0.521**
Social					1	0.725**
Customer Experience						1

All correlations are significant (\*\*) at the 0.01 level. Considering the above correlation coefficients, all five hypotheses are empirically supported, and thus accepted (see Table 5 below).

**Table 5: Hypotheses Tested**

Hypotheses	Statistical Evidence	Verdict
<b>H<sub>1</sub>:</b> There is a significant relationship between the esthetic factor and customer experience.	$r = 0.640$ ; $p < 0.01$ – moderate positive correlation	Accept
<b>H<sub>2</sub>:</b> There is a significant relationship between the distinctiveness factor and customer experience.	$r = 0.521$ ; $p < 0.01$ – moderate positive correlation	Accept
<b>H<sub>3</sub>:</b> There is a significant relationship between the cognitive factor and customer experience.	$r = 0.614$ ; $p < 0.01$ – moderate positive correlation	Accept
<b>H<sub>4</sub>:</b> There is a significant relationship between the affective factor and customer experience.	$r = 0.708$ ; $p < 0.01$ – strong positive correlation	Accept
<b>H<sub>5</sub>:</b> There is a significant relationship between the social factor and customer experience.	$r = 0.725$ ; $p < 0.01$ – strong positive correlation	Accept

**Regression Analysis:** A multiple regression analysis was performed to evaluate if the independent factors (esthetic, distinctiveness, cognitive, affective and social) can predict spaza shopping experiences. The resulting model summary is shown in Table 6 below. The R squared value is 0.652, meaning that the independent predictor factors (esthetic, cognitive, affective, distinctiveness and social) explain 65.2% of the variation in the dependent factor (customer experience).

**Table 6: Multiple Regression Analysis**

Independent Variable	Unstandardized Coefficients				R <sup>2</sup> =0.652
	$\beta$ Coefficient	Standard Error	Beta Coefficient	t-value	
Esthetic	0.130	0.068	0.141	1.918	0.057
Distinctiveness	0.027	0.059	0.029	0.460	0.646
Cognitive	0.165	0.059	0.169	2.785	0.006*
Affective	0.230	0.078	0.221	2.949	0.004*
Social	0.388	0.060	0.396	6.509	0.000*

The results show that esthetic ( $\beta = 0.130$ ;  $t = 1.918$ ;  $sig = 0.057$ ) and distinctiveness ( $\beta = 0.027$ ;  $t = 0.460$ ;  $sig = 0.646$ ) are not significant predictors of customer experience while cognitive, affective and social factors are. Social is the most significant predictor of customer experience ( $\beta = 0.388$ ;  $t = 6.509$ ;  $sig = 0.000$ ). The second most significant predictor of customer experience is affective ( $\beta = 0.230$ ;  $t = 2.949$ ;  $sig = 0.004$ ). Of all the significant variables, cognitive has the smallest impact on the dependent variable, customer experience ( $\beta = 0.165$ ;  $t = 2.785$ ;  $sig = 0.006$ ). All the relationships of the latter three factors are positive and statistically significant, implying that a one-unit increase in one factor corresponds with an increase in customer experiences while other factors are kept constant.

## 5. Conclusions and Recommendations

Spaza shops form an important component of the township economy in South Africa. Therefore, research in this sector will not only assist spaza shop managers but will help strengthen the economic potential of the sector and alleviate poverty. This study sought to investigate the factors influencing the shopping experience of spaza shop customers. The empirical data confirm the existence of positive correlations between the independent factors (esthetic, distinctiveness, cognitive, affective and social)–collectively termed ‘experience factors and the customer experience in a spaza shop context. The esthetic factor had a significant positive moderate relationship with customer experience ( $r = 0.640$ ;  $p < 0.01$ ). This study accepts H1 and confirms that esthetic is a factor of customer experience in spaza shops. The multiple regression analysis results pointed out that esthetic ( $\beta = 0.130$ ;  $t = 1.918$ ;  $sig = 0.057$ ) is not a significant predictor of customer experience in the spaza shop context. Aesthetics constitute the appeal of the building design, color and setting of the spaza shop in the context of this study. Thus, considering the above, managers and owners of spaza shops should focus on creating an attractive spaza shop that offers an esthetically pleasing environment to its customers. Despite aesthetics not being a significant predictor of customer experience, its relevance as a factor of customer experience is acknowledged and with this in mind, it is thus advisable that spaza shop managers focus on less costly ways of enhancing aesthetics.

By finding esthetic to be an important customer experience factor, this study confirms findings by Cassel (2015), Oh et al. (2007) and Radder and Han (2015) who found esthetic to be a factor of experience in retail, Bed and Breakfast and museum context, respectively. This study also found that the distinctiveness factor has a significant positive moderate relationship with customer experience ( $r = 0.521$ ;  $p < 0.01$ ). This provides adequate empirical evidence to accept H2, meaning that distinctiveness has a significant positive correlation



with customer experience in a spaza shop context. According to the results of the multiple regression analysis, distinctiveness ( $\beta = 0.027$ ;  $t = 0.460$ ;  $\text{sig} = 0.646$ ) is not a significant predictor of customer experience in a spaza shop context. As with the esthetic factor, distinctiveness is a factor of customer experience but does not act as a significant predictor of an experience, and recommendations made will relate to the more affordable options. The finding of the study also indicates that the cognitive factor has a statistically significant positive moderate relationship of ( $r = 0.614$ ;  $p < 0.01$ ) with customer experience. This provides enough evidence to accept H3 which states that cognitive has a significant relationship with customer experience ( $r = 0.614$ ;  $p < 0.01$ ). The results of the multiple regression analysis further confirm that cognitive ( $\beta = 0.165$ ;  $t = 2.785$ ;  $\text{sig} = 0.006$ ) is a statistically significant predictor of customer experience in a spaza shop context.

Therefore, spaza shop managers and owners should focus on strategies that can engage customers cognitively during the shopping process. Affective is concerned with how the shopping environment affects the customer's feelings and moods whilst shopping (Bagozzi et al., 1999 in Lee & Chen-Yu 2018; Wu et al., 2018). A study by Bustamante and Rubio (2017) reports that affective has a statistically significant relationship with in-store customer experience in a retail context. This finding is supported by this study as the affective factor has a significant positive strong relationship with customer experience ( $r = 0.708$ ;  $p < 0.01$ ). This provides enough evidence to accept H4 which states that the affective factor has a significant relationship with customer experience. The multiple regression analysis results point out that affective ( $\beta = 0.230$ ;  $t = 2.949$ ;  $\text{sig} = 0.004$ ). Bustamante and Rubio (2017) report that the social factor has a statistically significant relationship with in-store customer experience in a retail context. Similarly, Song, Altiny and Wang (2018) found that social interaction (with employees and other customers) has a positive effect on customer experience in the hospitality business context (restaurants and cafés). The above results are consistent with the result of this study, as society has a significant positive strong relationship with customer experience ( $r = 0.725$ ;  $p < 0.01$ ). The empirical evidence leads to acceptance of H5 which states that there is a significant relationship between the social factor and customer experience. Social is the biggest predictor of spaza shopping experiences amongst the independent variables. Therefore, managers and owners of spaza shops should intentionally encourage social interactions during the shopping process (Bustamante & Rubio, 2017).

**Recommendations:** Following the foregoing conclusions and implications, the following recommendations to improve the experience of customers in a spaza context are provided. With regards to improving the esthetic factor, spaza shops are encouraged to keep their store environments clean and tidy, as ideally, one would like the majority of the customers to feel that they are shopping (especially for food products) in a clean environment. Dustbins should be visibly located both inside and outside the spaza shop to keep the environment clean. To assist in making the interior appearance more attractive, spaza shops could incorporate decorations, wallpaper or other visual displays inside the store. Warm paint colors (orange, red and yellow), pot plants, trees, concrete paving or tarring can be incorporated into the exterior environment in spaza shops to make them cleaner, and more attractive and appealing for shoppers. Distinctiveness provides an opportunity for spaza shops to attract more customers and insulate their businesses from competitors. It is thus recommended that spaza shop managers/owners should regularly interact with their shoppers and gather advice, opinions and preferences on how they could stand out more. Doing so can assist spaza shops to obtain information on how to become more distinctive in the market.

It is also recommended that spaza shops decorate their external appearance by incorporating unique themes for their stores. To improve the cognitive factor, it is recommended that spaza shops put up posters (for example appetizing serving suggestions) to entice customers to purchase products. The posters should be regularly changed based on products and services sold in the store. Doing so may inspire customers with creative ideas on how to prepare some of the products they purchased when they return home. Spaza shops should also incorporate expertise or knowledge about their products and services (Cassel, 2015). Brochures or information pamphlets can provide customers with food serving suggestions and important information about some of the products and services available for sale in spaza shops, for example. To promote positive affective experiences (i.e., satisfied customers), spaza shops are encouraged to always sell fresh products to their customers (especially fruit and vegetables) and to refrain from selling spoilt, stale or counterfeit products and services to customers, as doing so may upset customers, causing a negative affective experience (disappointment, anger, disgust). It is further recommended that spaza shop managers/owners increase

marketing activities around their products/services, especially when running promotions.

Doing so may arouse excitement around the purchase activity in spaza shops and may create joy when customers find/purchase products and services at reduced prices (Jin & Sternquist, 2004). Spaza shop owners/managers/employees are further encouraged to always make their customers feel welcome by treating them in a respectful and friendly manner (Song, Altiny, & Wang, 2018) as it may contribute to a positive affective experience. The social factor was found to have the biggest predictive effect on customer experience. It is thus recommended that spaces should be allocated (Bustamante & Rubio, 2017; Cachero-Martinez & Vazquez-Casielles, 2018) at the spaza shop setting for conversations to happen, such as placing a bench outside the spaza shop for customers to sit, relax and enjoy the social experience offered at the spaza shop. It is also recommended that spaza shops employ personnel who are genuinely able to spark meaningful conversation to make the store a social environment (Bustamante & Rubio, 2017) as this contributes to the social factor of customer experience. Spaza shops are also encouraged to solve customer complaints adequately and promptly, as ideally, one would like the majority of the customers to feel that their queries are solved with adequate assistance from employees as opposed to being left unattended indefinitely.

### Limitations of the Study and Recommendations for Future Research

This study acknowledges several limitations. The first limitation is that of age distribution – only 10.2% of shoppers in this sample were 45 years and older. Views of older shoppers are important and need to be investigated as well. The sample in this study constituted customers who had bought products and services in spaza shops that are located in six townships within one metropolitan city in South Africa. This means that the generalisability of the results of this study is limited to customers and spaza shops that are situated in these townships only. In light of this, it is recommended that future studies replicate this study in other spaza shops situated in other townships so that the results can be compared, and benchmarks can be created for each experience factor. The research tool used to measure customer experience demonstrated high validity and reliability for each experience factor; therefore, future researchers could apply this scale in other experience contexts or alternatively, identify other factors that might influence the customer experience in spaza shops.

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## Indonesia-China Trade Performance in the RCEP Forum

Ragimun<sup>1\*</sup>, Mutaqin<sup>2</sup>, R. Nurhidayat<sup>3</sup> & Akhmad Yasin<sup>4</sup>

<sup>1</sup>Research Centre for Macroeconomics and Finance, National Research and Innovation Agency, Jakarta, Indonesia

<sup>2</sup>Research Centre for Economics of Industry, Services and Trade, National Research and Innovation Agency, Jakarta, Indonesia

<sup>3</sup>Research Centre for Cooperative, Corporation and People's Economy, National Research and Innovation Agency, Jakarta, Indonesia

<sup>4</sup>Research Centre for Domestic Government, National Research and Innovation Agency, Jakarta, Indonesia  
ragimun@gmail.com, mutaqinhasan@gmail.com, noerhidayat@gmail.com, akhmadyasin08@gmail.com

**Abstract:** This study aims to map out Indonesia's export performance, the competitiveness of its commodities, and the position of some of Indonesia's flagship commodities in China. The research method used in this study is the Revealed Comparative Advantage (RCA) and the Constant Market Share Analysis (CMSA). The data is from the Indonesia Central Statistics Agency (BPS) and UN Comtrade for 4-digit HS products. The finding from this study indicates that Indonesia's trade balance with China for the last three years (2018-2020) has widened the deficit. Intense negotiations with China are necessary to open up trade access to overcome the trade deficit. The Government is encouraged to launch the development of flagship products with high market values, such as chemicals, machinery, electricity, and textiles. In addition, the national downstream program for mineral and metal products is encouraged to do more robust plans, including considering attracting new industrial investment from China.

**Keywords:** *Competitiveness, Featured Products, Strategy.*

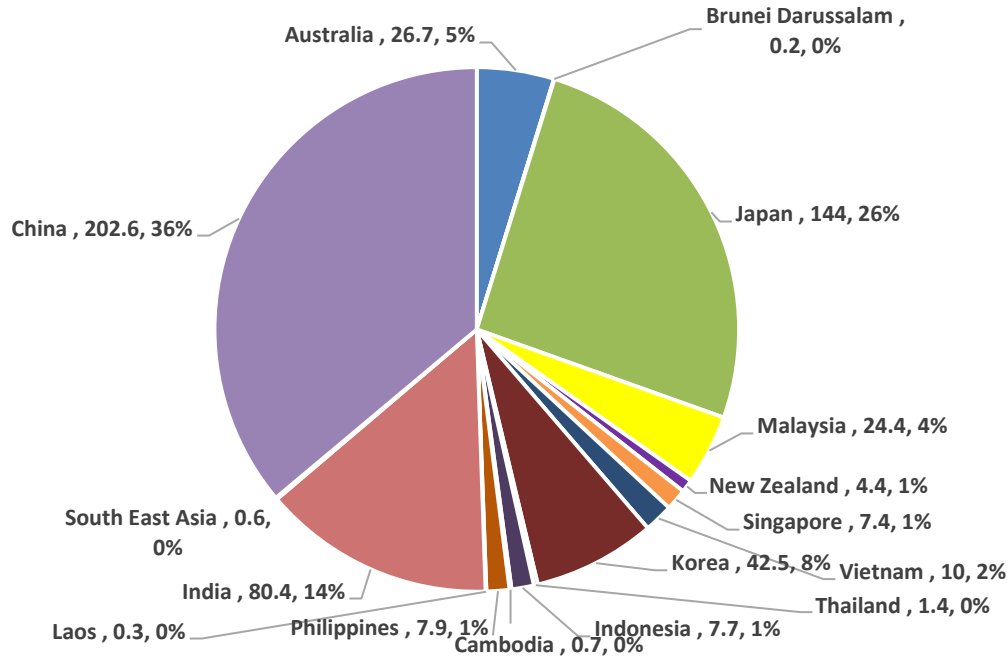
### 1. Introduction

In order to respond to several dynamics of changes in the world economy and strengthen an open global market as a fundamental part of the global economic recovery, the Government of Indonesia signed the Regional Comprehensive Economic Partnership (RCEP) on November 15, 2020. The RCEP agreement was initiated by Indonesia when it became the Chair of ASEAN in 2011, and Indonesia was then assigned to be the Chair of the RCEP negotiation. The RCEP is trade cooperation carried out by several ASEAN countries and ASEAN trading partners. The RCEP is a free trade commitment among its members. The main principle of this partnership and the construction of free trade cooperation is to create as many benefits as possible by optimizing the networks of countries involved (ADB, 2022). One of many bilateral cooperations available in the RCEP is the bilateral trade between Indonesia and China. The implementation of the RCEP Agreement, which is targeted to be fully ratified in the first quarter of 2022, is becoming more critical amid global economic shocks caused by the US-China trade war, the pandemic of Covid-19, and the Ukrainian War. To face the upcoming implementation of this agreement, it is crucial for Indonesia to prepare some strategic steps in anticipative efforts when it is implemented and to maximize the opportunity provided by the RCEP Agreement. Some studies conducted by several agencies recently recommended that participating in the RCEP agreement will bring positive impacts to Indonesia.

One of them is connecting Indonesia to the global value chain network of other RCEP members, such as China, Japan, South Korea, Australia, and New Zealand, as well as other ASEAN member countries. However, the problem faced by Indonesia is the existence of export goods that have high competitiveness but are difficult to enter the market of RCEP member countries. In addition, there are potential export goods that have low competitiveness and are still difficult to enter the markets of RCEP member countries. From the distribution of Indonesia's exports to countries that are members of the RCEP forum, most of Indonesia's exports are still going to China, Japan, South Korea, and India. Therefore, this is a challenge for the Government of Indonesia, how Indonesia can open some access and market its export products to these countries, especially China. China is important for Indonesia since its high demand for natural resources and manufactured products. Likewise, the Government needs to make some breakthroughs to reduce product importation from China. Therefore, conducting a study to map out Indonesia's good exportation to China is necessary. As a country with high economic growth, China has become the largest country among the RCEP members that absorbs

many Indonesian products. Indonesia's exports to China in 2020 are more than USD14 billion. The following is an illustration of the proportion of Indonesia's exports to several RCEP member export destinations including India (Ferrantino, Maliszewska and Taran, 2019).

**Figure 1: Proportion of Indonesian Exported Goods to Export Destination Countries**



**Source:** World Bank, 2020.

Considering the value of Indonesia's exports and imports, optimizing trade cooperation with RCEP member countries is very strategic, especially with China. Indonesia's export growth, especially non-oil and gas, continued to experience an upward trend, even though the trade balance was in deficit. Specifically, Indonesia's exports to China experienced a relatively large trade balance deficit. In the future, it will become an opportunity and a challenge for the Indonesian Government to increase its exports to China by increasing its competitive products and how to downstream its several natural products. Through this study, we hope that Indonesia can determine the position of its leading commodities and formulate its trade policies with China.

**Research Purposes:** This study aims to map Indonesia's leading commodities' export performance and competitiveness with China. This research is also expected to describe the indicators and positions of many Indonesian commodities (HS 4 digits) against China. We hope the indicators can contribute to preparing some strategies for Indonesian delegates who do some trade negotiation activities with China.

**Research Output: By reading this paper, we hope readers can:**

- Identify or map out Indonesia's export performances and the competitiveness of its commodities with China (HS 4 digits).
- Position every Indonesia's commodity with China and some strategies that Indonesia can take.
- Recommend policies related to Indonesia's export performances and its competitiveness with China. The three outputs above are beneficial for the line ministries and the Indonesian embassies and Trade Attaché in China to do some diplomatic ties in upscaling Indonesian exports.

## 2. Research Method

This research uses exploratory research and descriptive methods. This method uses the *Revealed Comparative Advantage* (RCA) and *Constant Market Share Analysis* (CMSA) approaches. The RCA approach

analyzes the comparative competitiveness of all Indonesian export commodities to China. The RCA formulation can be found as follows: (Tambunan and Wijanarko, 2000)

$$RCA = \frac{(X_{ia}) / (totalX_a)}{(X_{iw}) / (totalX_w)} \text{-----(1)}$$

Where:

- X = export or export value
- i = type of commodity
- a = country of origin
- w = world

If the  $RCA < 1$  or close to 0, it means that the competitiveness of the commodity is weak, and if the  $RCA > 1$ , then the competitiveness is strong. The higher the RCA of a commodity, the stronger its competitiveness. Calculating the CMSA or the constant market share model is used to determine the competitive advantage or competitiveness of exports in the world market from a producing country to some competing countries. This model shows a calculation that looks at competitiveness and the main products of these products against changes in world demand or trading partner countries (Balassa, 1989). The CMSA formulation is as follows:

$$CMSA = \left[ \sum_{jk} \Delta \left[ \frac{X_{ijk}}{X_{jk}} \right]_{IA} * \left[ \frac{X_{jk}^0}{X^0} \right]_{IB} + \sum_{jk} \Delta \left[ \frac{X_{jk}}{X_{...}} \right]_{IIA} * \left[ \frac{X_{ijk}^0}{X_{jk}^0} \right]_{IIB} + \sum_{jk} \Delta \left[ \frac{X_{ijk}}{X_{jk}} \right]_{IIIA} * \Delta \left[ \frac{X_{jk}}{X_{...}} \right]_{IIIB} \right] \text{..... (2)}$$

**The CMSA Calculation Consists of 3 Criteria:** The Competitiveness Effect (CE): a gain or loss in market share that shows the competitiveness of a product. The calculation measures the change in the share of the exporting country in the import destination market (IA) multiplied by the *j* share of imports from trading partner countries or export destination countries in the world market (IB). Or, the CE can be obtained by calculating the change in exporting countries divided by destination market imports (IA) multiplied by the initial share of imports of partner countries in world trade (IB).

$$\left[ \sum_{jk} \Delta \left[ \frac{X_{ijk}}{X_{jk}} \right]_{IA} * \left[ \frac{X_{jk}^0}{X^0} \right]_{IB} \right] \text{.....(3)}$$

- $X_{ijk}$  : export for commodity *j* from country-of-origin *k* (e.g. Indonesia) to destination country *i*
- i* : export to destination country
- j* : type of commodity
- k* : country of origin
- $X_{jk}$  : export of commodity *j* from country-of-origin *k* (e.g. Indonesia)
- $X_{jk}^0$  : export of commodity *j* from country-of-origin *k* (Indonesia) to destination country on initial period (0)
- $X^0$  : world's exports in the initial period (0)

A positive CE means that the product's competitiveness is higher in the export destination country. While a negative CE indicates that the product's competitiveness is weaker in the export destination country. A zero CE means that the product does not have the competitiveness of the product in the export destination country. Initial Specialization (IS), is an indicator that shows that certain products have characteristics in a particular market that can be developed.

$$\sum_{jk} \Delta \left[ \frac{X_{jk}}{X_{...}} \right]_{IIA} * \left[ \frac{X_{ijk}^0}{X_{jk}^0} \right]_{IIB} \text{.....(4)}$$

- $X$  : world's export
- $X_{jk}^0$  : exports of commodity *j* of competing countries from country-of-origin *k* (e.g. Indonesia) to destination country *i* in the initial period (0).

The Initial Specialization (IS) is calculated from the change in imports of world trading partner countries (IIA) multiplied by the share of the country of origin in the import of the destination market (IIB). If the IS result is positive, it has more power to enter the market in the destination country. If the IS is negative, it has less power to enter the market in the export destination country, and if the IS result is zero, it does not have the power to enter the market in the export destination country. Adaptation (A) is an indicator that shows the ability of the product (supply of export) to respond or adjust due to changes in world demand.



$$\sum_{jk} \Delta \left[ \frac{X_{ijk}}{X_{jk}} \right]_{IIIA} * \Delta \left[ \frac{X_{jk}}{X_{...}} \right]_{IIIB} \dots \dots \dots (5)$$

The Adaptation (A) is obtained by calculating variations across changes in exporting country's market share (IIIB) and changes in the market share of trading partner countries for certain specific products in world imports (IIIA). If the A is positive, it indicates that the products are more able to adapt to market tastes in the export destination country. And if the A is negative, it shows that the products are unable to adapt to market tastes in the export destination country. A zero means that these products cannot adapt to market tastes in the export destination country. The outcome criteria of RCA and CMSA can be described as follows:

- If RCA > 1 and CMSA > 0, it means Great or good
- If RCA > 1 and CMSA < 0, means Sunset or
- If RCA < 1 and CMSA > 0, means Sunrise
- If RCA < 1 and CMSA < 0, means Suffer

From the results of the calculation of the RCA and the CMSA for each country, when displayed between Indonesia and China's partner country, it will be displayed as shown in the following table:

**Table 1: RCA and CMSA Criteria**

Indonesia China*	Suffer	Sunset	Sunrise	Great
Suffer	Trade	FDI Inflows	FDI Inflows	FDI Inflows
Sunset	FDI Outflows	Trade	FDI Inflows	FDI Inflows
Sunrise	FDI Outflows	Share	Trade	FDI Inflows
Great	FDI Outflows	FDI Outflows	FDI Outflows	Trade

**Source:** (Verico, 2020).

An ideal position of trade relations (export or import) between Indonesia and its partner countries is if the calculation of the RCA and CMSA of Indonesian products, or industries, shows a value equivalent to the value of the products or the value of industries of partner countries. However, if the values obtained differ, investment relations are the best form of bilateral relations. Indonesia can invest in partner countries if Indonesia's products are better than partner countries' products and vice versa. This study used 4-digit HS goods export data with the frequency of data used from 2016 to 2020. We obtain data from several sources, including UN Comtrade, the Indonesia Central Statistics Agency (BPS), and other sources. To deepen the analysis, we added some additional information to this study, such as references, literature, electronic media, and reports.

### 3. Literature Study

A total of fifteen countries of ASEAN countries, plus Japan, Australia, New Zealand, South Korea, and China, signed the Regional Comprehensive Economic Partnership (RCEP) agreement on November 15, 2020. The RCEP has become the largest multilateral trade forum in the world, initiated by Indonesia while it was the chairman of ASEAN in 2011. The RCEP was launched based on the spirit of strengthening trade and investment among the RCEP's members. This commitment is also expected to contribute more to minimizing regional economic inequality in the region (Clarissa and Gandara, 2020). More specifically, Indonesia expects its bilateral ties with China to improve its trade balance and broaden access to the transaction of goods between the two countries. Indonesia's trade policies have changed over the decades. Indonesia had withdrawn from global trade activities in the early 1960s. However, it re-opened in the next decade. Indonesia's trade policy development is increasingly open to the global economy with various liberalization policies.

This phase began in the early 1980s as the first step of its transformation for Indonesia to open its trade policy. These liberalization steps were taken in the form of international trade cooperation such as bilateral, regional, and global cooperation (Tsurayya, 2013). The trade liberalization came through free trade agreements (FTAs). With this free trade, Indonesia is expected to increase its GDP and investment to achieve

household welfare. Bilateral and regional cooperation such as ASEAN, the RCEP, and others were expected to create more trade activities. However, Indonesia had a smaller advantage over its trade liberation than other ASEAN countries. A simulation of full liberalization in the ASEAN positively impacts Indonesia's trade volume, exports, and imports. However, the percentage increase in imports was higher than the increase in exports, so it negatively impacted Indonesia's trade balance (Syadullah and Ardiansyah, 2014). On the other hand, the survey results (Kawai and Wignaraja, 2013) of several companies in mainland China and Japan.

The Republic of Korea, Malaysia, the Philippines, Singapore, and Thailand show higher estimates of the use of the FTAs by companies. It shows that around 32 percent of companies have taken advantage of the FTAs and have made better plans. The survey also revealed that the FTAs require a constant ongoing cost. Large companies can collect financial and human resources better than small and medium enterprises (SMEs). Another advantage of trade cooperation, based on some studies, is that trade cooperation will bring several benefits to Indonesia. Based on the Indonesia Trade Assessment and Development Agency (BP3) analysis of the Ministry of Trade, trade cooperation can bring welfare improvement, but at the same time, there will be an increase in the trade balance deficit with partner countries (Romarina, 2016). Further, studies suggest that Indonesia should strengthen its capacity to utilize the regional value chain considering that there are 6,050.

Indonesian custom tariffs (traded goods) are related to strong export and import connections to many trade areas. In 2019, the Indonesian Finance Ministry studied the impact of trade cooperation (the RCEP) on the Indonesian economy. This study uses the Computable General Equilibrium (CGE) model. The result of this study indicates that the RCEP will increase Indonesia's Gross Domestic Product (GDP) by only 0.05 percent between 2021 - 2032, much smaller than the benefits obtained by other RCEP countries. Vietnam gets 0.66 percent, South Korea 0.51 percent, Malaysia 0.35 percent, and Thailand 0.21 percent. However, further studies show that if Indonesia decides to leave the RCEP, its economic growth (GDP) will fall by -0.07 percent. Therefore, Indonesia has no choice but to remain a member of the RCEP and continue making structural adjustments to improve efficiency and competitiveness. Ulfah's (Ulfah and Felianty, 2017) research shows that the competitiveness of Indonesian products is weak compared to most other RCEP member countries. Therefore, the Indonesian Government must improve its product competitiveness and, at the same time, optimize its membership in the RCEP. The simulation shown in this study indicates that implementing the RCEP agreement is expected to improve trade performance, GDP, and welfare of most member countries, including Indonesia.

According to Moenardy (Moenardy et al., 2020), several strategies need to be carried out by the Indonesian Government in terms of regional trade cooperation. There are two strategies, either internal or external. Internal strategies include, among others, the Government must optimize cooperation and services to exporters. One of them is conducting labor training to improve quality products, creating and producing superior products that can dominate the market, and protecting farmers regarding seeds monopoly and medicines for plants. The external strategy includes, among others, the Government should negotiate with partner countries, such as China, so that there is no outpouring of China's products to Indonesia. Likewise, it is necessary to make regulations with multinational companies to empower Indonesian workers if they are to build industry in Indonesia (Kemendag, 2015). Current global economic development brings many impacts on Indonesia's economic growth. Therefore, it is necessary to map out Indonesia's competitiveness and trade specialization with Indonesia's main trading partners to determine the pattern of trade between countries (Romarina, 2016). Romarina's study explores Indonesia's comparative advantages with its major trading partners to identify Indonesia's leading sectors that contribute to its economic growth. Apart from identifying the leading sectors, Romarina also identifies the weaker sectors (looser sectors).

In his study, Romarina analyzes the trading model consisting of the gravity model, the Ricardian model, the Heckscher-Ohlin model, the Standard Trade model, and the New Trade model. These models analyze Indonesia's bilateral patterns with its main trading partners. In his study, Romarina concluded that Indonesia's trade pattern with its main trading partners, China, Australia, and the US, follows the Heckscher Ohlin (HO) model. The evidence shows each country's sectoral composition of export and import data exports abundant and intensively produced products. However, by looking at the size of the economy and the distance between countries, it is known that Indonesia-China trade relations follow the gravity model. Moreover, the higher share of exports and imports in the crude oil industry between Indonesia and Australia

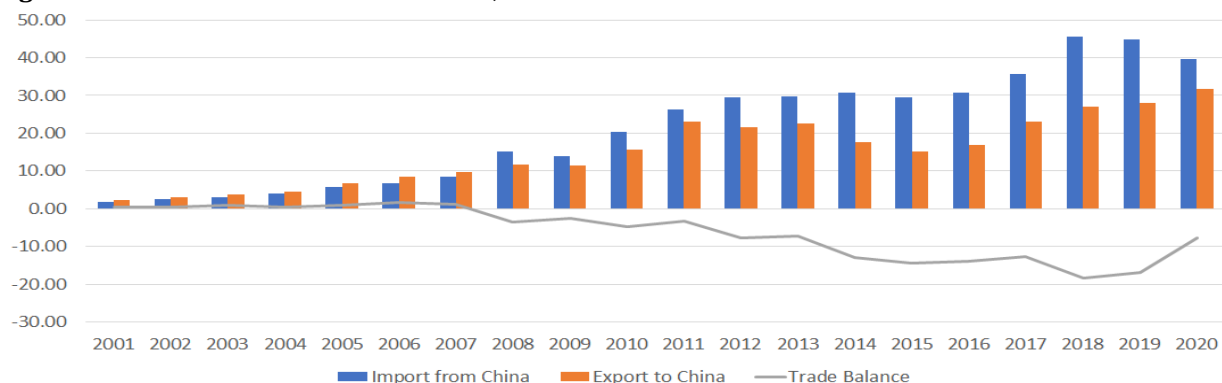
indicates that the trade pattern follows a new trading industry that signals intra-industry trade (Hasanah, 2020). In another reference, Galura (Cakra and Munandar, 2020) showed a sample of how brewed tea could be the world's most consumed beverage after water. The tea commodity has four types: Bulk Green Tea, Packed Green Tea, Bulk Black Tea, and Packed Black Tea. Even though Bulk Black Tea has the lowest average price, it has the highest demand and high growth of import value per year. Moreover, Russia is the leading Indonesian destination country for this commodity.

Using multiple linear regression, Galura aims to analyze the competitive position of Indonesian bulk black tea in the global market by applying the CMSA method. Trying to find factors that affect its competitiveness in the Russian market. The analysis used in this study uses the Global Trade Analysis Project (GTAP) application which predicts the impact of 17 countries with 43 products. The analysis using the CMSA method shows that Indonesia's competitiveness is low among some major exporting countries and has a negative trend. Then, based on multiple linear regression analysis, it shows that price is the most influential factor in the competitiveness of Indonesian bulk black tea in the Russian market. It means that the higher the price, the lower the competitiveness of Indonesia for bulk black tea commodities. In another study, Suwarno (Suwarno et al., 2012) used the CMSA to analyze the source of growth of tuna exports in international markets. Based on his study, Suwarno found an increase in the export of Indonesian tuna commodities in the international market due to the soaring of the international export market. The competitiveness of some Indonesian commodities also increased, such as frozen tuna, yellowfin tuna, skipjack tuna, tuna ness, and preserved tuna. Suwarno concluded that a critical factor that affects the quantity of tuna exported is the Gross National Product and the amount of tuna production in Indonesia.

#### 4. Results and Discussion

Indonesia-China bilateral relations rapidly increased in the last 20 years. Total trade between Indonesia and China increased 18 times, from US\$4 billion (2001) to US\$73 billion (2020). However, if we look at the growth of Indonesia's exports to China, it experienced some fluctuation and had a downward trend. Since 2008 Indonesia's trade balance with China has a growing deficit. Since 2008, Indonesia's imports of products from China have increased more than Indonesia's exports. The Indonesian trade deficit also occurred with other countries such as South Korea, Australia, New Zealand, Singapore, Thailand, & Laos.

**Figure 2: Indonesia-China Trade Balance, 2001-2020**

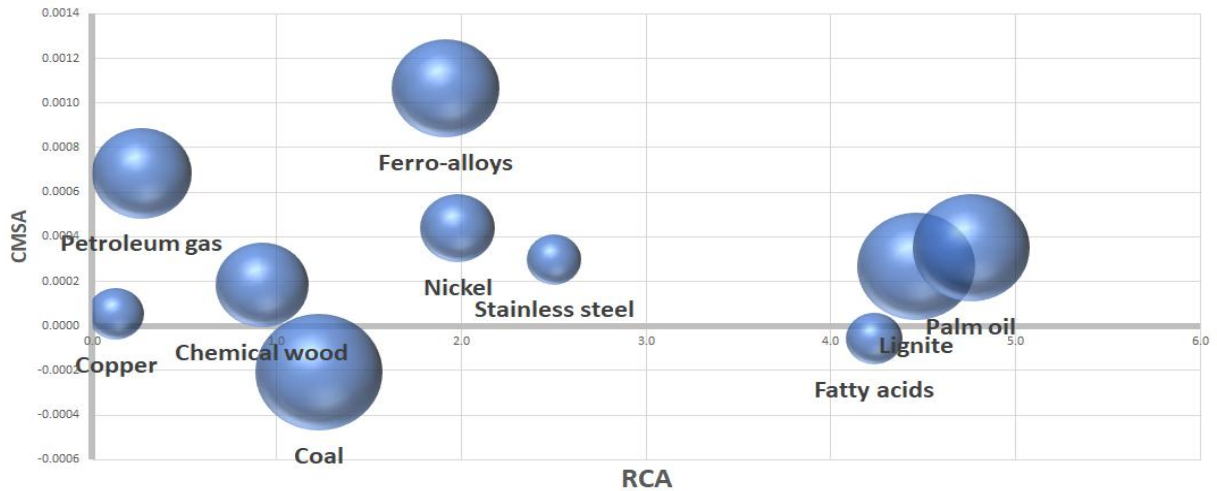


**Source:** Trade Map, 2021 (Ragimun et al., no date)

The fluctuations of some of Indonesia's export to China are in line with movements in world commodity prices, especially raw commodities. Most of Indonesia's exports to China are unprocessed natural commodities, such as oil, gas, coal, iron ore, and CPO (palm oil). Some commodities prices decreased in early 2018, such as oil, gas, coal, and CPO, except iron ore which had an upward trend. It impacted the total value of Indonesia's exports to China. If we look at Indonesia's competitiveness with China, of the 1259 export products (HS Code 4 digits) to China, there are 454 flagship products (36%) and 805 non-flagship products (64%). Only ten products from the 454 flagship products bring significant changes in export values. Ten flagship products of Indonesia in 2019 which have an upward trend and have 'Great' criteria (see attachment)

are iron ore (ferro-alloys), oil and gas, nickel, palm oil (CPO), coal, lignite, pulp, stainless, aluminium, and others. These flagship products, when we put them on the map, will look as follows;

**Figure 3: Competitiveness of Indonesia's Commodities to China in 2020**



**Source:** Trade Map, 2021 (Ragimun et al., no date)

If we want to make a short analysis on coal, for example, coal (HS Code 2701) has a high export value. However, it is no more flagship and becoming a sunset product since the world's attention to climate change and clean energy. Meanwhile, products with HS Code 2701-2702 Lignite, even though their export values are not as significant as coal's, are becoming flagship products since they are in the "great" category. If we move to Ferro-alloys with high CMSA and RCA scores, whereas the RCA score is higher than 1, we could claim that it is a flagship product. However, if we see coal and palm oil commodity, we can see that both have low CMSA score even though their RCAs is higher than 1. From this perspective, we can say that even though these two products are flagship commodities, their charm has begun to wane over time. Moreover, here, we conclude that Government is supposed to implement different policies and treatments for each commodity depending on their score on the map.

Sixty-eight flagship products from Indonesia to China (HS 4 digits) have the "Great" criteria. It means that these products still have the opportunity to scale up in quantity, market value, and market share. The majority of them are natural raw commodities, such as oil, gas, coal, lignite, nickel, fishery products, CPO, and others. Besides, several manufactured commodities such as textiles and garments, footwear, food and beverages, and household appliances still have the opportunity to enter the market by raising their quantities and market values. In addition to Indonesia's flagship commodities which have the "Great" category, some non-flagship commodities also have the "Sunset" category. There are 19 "Sunset" commodities, meaning they have a downward trend in terms of quantity, value, and market share in China. These products include coal, textiles, paper, raw rubber, copper wire, plywood, and several others. Since being categorized as "Sunset" commodities in 2014, the category did not change until 2019. These product categories are not flagship products. To increase their market share and make them have "sunrise" or "great" categories, the role of the Government is very necessary. Especially to encourage the downstream program of this raw material exportation into derivative products. By doing this program, Indonesia's commodities will get higher values in the market. Negotiating and opening access to these commodities in China or other RCEP members are important. The following are some products that still have the opportunity to increase the market values and quantities in China.

**Table 2: Value and Number of Exported Products to China that Need to be Improved**

NO	HS Code	China	
		Products	Values (USD Millions)
1	01-05: Animal Products	13	70.08
2	06-15: Agricultural Products	34	3,378.36
3	16-24: Processed foods	17	316.05
4	25-27: Mineral Products	24	10,559.67
5	28-38: Chemical Industries	60	1,939.93
6	39-40: Plastics/rubber	19	402.69
7	41-43: Leather, fur and its products	6	23.35
8	44-49: Wood products	28	2,789.87
9	50-63: Textiles	42	267.39
10	64-68: footwear dan headgear products	13	529.55
11	69-71: stone and shard products	18	20.39
12	72-83: Metal products	65	3,570.59
13	84-85: Electrical machines and tools	67	358.34
14	86-89: Transportation products	12	65.22
15	90-99: Other products	36	180.14
	<b>Total</b>	<b>454</b>	<b>25,105.61</b>

Source: UNComtrade, 2020.

All 454 commodities that can be upscaled to become flagship commodities have a large value, which is USD 25,105.61 million. The attention and effort of the Government are essential to increasing Indonesia's market share. Currently, China is the country that absorbs a lot of Indonesia's flagship commodities. The existence of bilateral relations between Indonesia and China and Indonesian membership in the RCEP makes it Indonesia easy to negotiate commodities that can enter the Chinese market. The commodities are agricultural, mineral, chemical, wood, textile and garment, steel products, machinery, and electrical equipment.

## 5. Conclusion and Recommendations

**Conclusion:** The total value of Indonesia's trade with China for two decades (2001-2020) experienced a rapid growth rate of 18 times. However, this growth rate was not followed by an improvement in the Indonesia-China trade balance because from 2008 to 2020, Indonesia's trade balance with China experienced a relatively sharp deficit. The analysis results show that several Indonesian flagship commodities have the potential to raise Indonesian trade values. From 1259 export commodities, Indonesia has 454 flagship commodities with 4-digit HS (36%). Indonesia's flagship commodities include oil, gas, coal, lignite, nickel and CPO. These commodities are excellent in the "Great" category. At the same time, Indonesia also has some commodities that are not-flagship commodities but have large trade values, such as garments, paper, coal briquettes, copper, and rubber. They are commodities in the "Sunset" category.

**Recommendations:** Indonesia needs to intensify communications with China and several RCEP members to overcome its trade balance deficit. We suggest Indonesia start with countries with strong trade relations that significantly impact Indonesia's trade performance, such as China, South Korea, Australia, and New Zealand. Indonesia also needs to scale up its opportunities with other ASEAN members, especially Thailand, Singapore, and Laos. Focusing on China under the RCEP cooperation, Indonesia needs to raise its trade values, especially for some of Indonesia's flagship commodities such as CPO, oil, gas, coal, and lignite. Lastly, strengthening competitiveness and renegotiating some of Indonesia's non-flagship commodities are two things that cannot be put off any longer, especially for goods that experienced a decline in demand in China, such as textiles and paper.

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## Local Government Financial Performance: The Role of Political Monitoring

Miranti Putri & Khoirul Aswar\*

Universitas Pembangunan Nasional Veteran Jakarta, Indonesia  
khoirulaswar@upnvj.ac.id, aswar\_law@yahoo.com

**Abstract:** This study intends to investigate and demonstrate the impact of local government financial performance as influenced by political oversight, regional wealth, intergovernmental revenue, and capital spending. In Indonesia in 2019, the district/city local governments were the subject of this study. The Report on Local Government Finances (LKPD) accessible at the Audit Board of the Republic of Indonesia was used as secondary data (BPK RI). The data used in this study included 491 data samples chosen using the purposive selection approach from 507 districts/cities across Indonesia. The analytical method used in this study was path analysis with Smart PLS software and a significance level of 5%. Structural Equation Modeling was used for data analysis (SEM). The findings of this investigation showed that regional wealth, intergovernmental revenue, and capital expenditures have an impact on local government's financial performance. Political supervision, however, does not mitigate the association between intergovernmental revenues and capital expenditures on the financial performance of local governments, which reduces the relationship between regional wealth and local government financial performance. The results of this study are anticipated to be used as source material for studies on the factors affecting local government financial performance and to help local governments by providing information on the monitoring activities carried out by numerous Regional People's Representative Council (DPRD) members. As a result, local governments will be encouraged to increase legislative oversight to improve their financial performance.

**Keywords:** *Regional Wealth, Intergovernmental Revenue, Capital Expenditure, Political Monitoring, Financial Performance.*

### 1. Introduction

All rights and obligations under the regional financial management technique, which is defined as income, spending in the form of regional expenditure, and other financings, are affected by the implementation of regional autonomy. Regional autonomy is the exercise of sovereignty over one's own concerns or regional interests, including one's own citizens' welfare (Law No. 23, 2014). Implementing all government affairs to attain prosperity carried out equally, democratically, transparently, and effectively includes regional financial management in the framework of funding. It is anticipated that regions will further develop their own resources and potential with the introduction of regional autonomy, resulting in a more prosperous local population (Noviyanti & Kiswanto, 2016). The concepts of compliance and fairness are used to implement regional financial management guidelines in accordance with Government Regulations 5 No. 105 of 2000, which also stipulates that regional financial management guidelines must be accountable. Creating strong governance requires effective local financial management, with financial performance measurement indicators serving as a crucial yardstick for performance evaluation in local government (LG) (Darwanis & Saputra, 2014). The findings and performance suggestions are connected to the work program on implementing the internal control system.

Compliance with laws and regulations was published in the opinion on the financial performance accountability report following the examination conducted by BPK-RI. Results of the first semester 2020 audit by the Audit Board of the Republic of Indonesia on 541 the Report on Local Government Finances in 2019 showed Unqualified Opinion (WTP) on 485 (90%) LKPD, Qualified Opinion (WDP) on 50 (9%) LKPD, and Disclaimer Opinion (TMP) on 6 (1%) LKPD. Due to inadequate oversight by responsible parties with the authority, a lack of a strong internal control system structure, and a high level of disobedience to the relevant rules and regulations, the LG that obtained the WDP opinion was nonetheless registered (Redaksi, 2019). Based on the First Semester Audit Board of the Republic of Indonesia (BPK RI) Examination results in 2020, it was determined that there was a problem with non-compliance with financial impacts. The Audit Board (BPK) disclosed that there were 6,160 findings, consisting of 10,499 problems, 5,175 issues with internal control systems (SPI), and 5,324 issues with non-compliance with statutory provisions, which led to losses of Rp. 1.52 trillion. There were additional issues with financial performance, specifically with the 3E (Economy,

Efficiency, and Effectiveness) aspect, according to the Audit Board of the Republic of Indonesia Examination Report for the Second Semester of 2020, which revealed that 53 issues were found and led to a loss of Rp. 137.86 billion.

Furthermore, issues with its reporting and management of capital expenditures persist, as evidenced by the First Semester Audit Board of the Republic of Indonesia Examination results in 2020. 484 LG lost Rp 432.75 billion due to payments for capital expenditures that were more than necessary due to physical limitations and non-compliance with specifications or job details. Due to payments for capital expenditures that were more than necessary because of physical constraints and non-compliance with specifications or project specifics, 484 LGs lost Rp 432.75 billion. Additionally, there are issues with the way in which the regional revenue management method implements revenue. The issue was the absence of other revenues, which affected 36 LG and led to a loss of Rp. 8.08 billion. This loss was caused by the overpayment of government subsidies and regional revenues.

The use of a lower tax of/Non-Tax State Revenue (PNBP) rate than was necessary. This issue arose as a result of the relevant officials' under-monitoring of the administration of capital expenditure accounts, income, and levies, as well as the management of regional financial governance obligations. It had an impact on ineffective regional financial management, procedures that are carried out in a manner inconsistent with the provisions, human resources that were not properly educated, targets and targets that had not been fully attained, and all issues pertaining to the effectiveness of LG performance (Summary of BPK's Audit Reports (IHPS BPK, 2014)). Furthermore, with political supervision serving as a moderating variable, this study sought to evaluate and quantify the impact of regional wealth, intergovernmental revenue, and capital expenditures on the financial performance of LG.

## 2. Literature Review and Hypothesis Development

**Agency Theory:** Agency theory, according to Jensen and Meckling (1976), is a theory that describes a legal relationship between the principal and the agent in which the principal gives the agent discretion and trust when making decisions. A complex interaction in the public sector is described by agency theory (Suryaningsih & Sisdyani, 2016). To assess an area's performance, LG is required to produce reports, disclose all operations, and provide accountability reports to the community (Masdiantini & Erawati, 2016). This is done to make sure regional wealth management has been effectively managed and to prevent information asymmetry to further optimize the financial performance of LG. Agency issues will develop if regional finances are not managed for the welfare of the community in the best possible way.

**Stakeholder Theory:** Stakeholder theory describes internal or external parties including the government, rival businesses, the global environment, environmental watchdogs, and institutions outside the business and community (Hadi, 2014, p. 93). Stakeholder theory calls for data or information that is more pertinent, trustworthy, and diverse when determining a course of action (Mardiasmo, 2009, p.159). According to Sesotyaningtyas (2012), the relationship between the constituents the DPRD represents and the LG might be compared to that between stakeholders and managers. In the public sector, stakeholders, specifically the population represented by the DPRD, give the regional government complete ability to run the government and arrange it in a way that maximizes efficiency.

**Local Government Financial Performance:** Performance is defined as the result of activities that need to be completed or have already been completed in relation to the use of a measurable amount and quality of budget, according to Minister of Home Affairs Instruction No. 21 of 2011 article 1 (37) related to the Guidelines for Regional Financial Management. A view of an activity or program performance is how well it helped an entity reach the goals outlined in Bastian's (2006) planning strategy. Mahsun (2013), the financial performance of LG is an indicator of the degree of effectiveness of regional financial management in putting programs, work activities, or policies into place that will help the area achieve its goals. Performance measurement is a technique of evaluating accomplishment or success in implementing a work program to fulfill a mission (mission accomplishment) through commodities, services, or processes to obtain a result (Aswar et al., 2020; Putri et al., 2020).



**Regional Wealth and Local Government Financial performance:** According to Law No. 33 of 2004 Governing the Financial Balance of the Central Government and Regional Governments, regional wealth is defined as the totality of an area's economic resources that are efficiently managed to meet demands and maximize potential. According to Law Number 23 of 2014 concerning Regional Government, Local Own-source Revenue (PAD) is income from the region's original economic activity or activities (Halim & Kusufi 2014, p. 101). Regional taxes, regional levies, the outcomes of distinct regional wealth management, and other legal local revenue are all included in the PAD classification. As a kind of decentralization, PAD can be utilized as a goal to exercise LG authority to finance regional government operational activities without relying on central government transfer monies (Aswar, 2019). A region's financial performance is determined by the amount of PAD it receives, and a greater PAD shows that the LG is able to manage the local economy and all of its potential (Sari, 2016). According to agency theory, LG needs to be transparent in its financial reporting to build public trust in regional financial management. The impact of PAD on the financial performance of LG has been studied previously by Aswar (2019), Amalina and Sumardjo (2020), Samadara et al. (2021), Oktaviani et al. (2020), and Simanullang (2013). Results from earlier studies indicate that PAD has an impact on how financially successful LG.

**H<sub>1</sub>:** Regional wealth affects the financial performance of LG.

**Intergovernmental Revenue and Local Government Financial performance:** In order to help regions fund governance and reduce potential resource imbalances between them, the central government transfers cash known as "balancing funds" to LG as a source of revenue. Accountable financial management must come from the center (Lutfia & Bagana, 2018). The Special Allocation Funds (DAK), Profit Sharing Funds (DBH), and General Allocation Funds make up the balancing fund, which is based on Law No. 33 of 2004 Article 10 Paragraph 1. (DAU). The distribution or allocation of LG finances is indirectly responsible for enhancing and optimizing LG's performance. A balancing fund is one way that the central government pays attention to LG. According to the stakeholder theory perspective, intergovernmental money is not generated between regions because it comes from the federal government and is distributed to them. Since regional financial management is under the supervision of the national government, regional administrations must fulfill all of their responsibilities to enhance regional financial performance. The relationship that the central government has with LG as an external entity, which necessitates knowledge of the flow of funds spent, will have an impact on LG's financial performance. In the past, Noviyanti and Kiswanto (2016), Awwaliyah et al. (2019), and Ilmiyyah et al. (2017) investigated the impact of intergovernmental income on the financial performance of LG. The findings imply that intergovernmental income affects LG's financial performance.

**H<sub>2</sub>:** Intergovernmental revenue affects the financial performance of LG.

**Capital Expenditure and Local Government Financial performance:** According to Government Regulation No. 71 of 2010 concerning Government Accounting Standards, capital expenditures are defined as capital formation through the purchase of fixed assets and other assets that provide benefits for longer than one year, including maintenance costs that extend and improve the quality and useful life of these assets. The Local Government Budget (APBD) structure includes capital expenditures in the direct expenditure group. Capital expenses are costs associated with the acquisition of fixed assets for initiatives carried out by LG to enhance the welfare of their constituents who receive benefits for more than one fiscal year (Ayinde et al., 2015). Investing in capital assets may involve buying furniture, machinery, land and buildings, roads, irrigation systems, and other permanent assets. The amount and caliber of infrastructure and facilities constructed by regional governments to carry out regional government functions are reflected in capital expenditure. Due to the high realization of capital expenditures, which indicates a significant amount of infrastructure development, LG is under pressure to deliver high-quality services to the public and maintain financial transparency as a measure of its effectiveness. Capital spending has a considerable impact on LG's financial performance, according to earlier studies by Oktaviani et al. (2020) and Mulyani and Wibowo (2017).

**H<sub>3</sub>:** Capital expenditure affects the financial performance of LG.

**Political Monitoring Moderates the Effect of Regional Wealth on Local Government Financial Performance:** To maximize the financial performance of LG, political supervision is crucial. The level of wealth created by a PAD is a key signal for legislative monitoring; the greater the PAD developed, the better the LG's ability to maximize and enhance its financial performance. The amount of monitoring done in

relation to PAD will increase with the high number of DPRD. The extent of PAD monitoring makes it possible for LG to effectively manage their budgets for the well-being of their constituents. The findings of Angelina et al. (2020) imply that monitoring can tame PAD and regional financial performance.

**H<sub>4</sub>:** Political monitoring moderates the relationship between regional wealth and LG financial performance.

**Political Monitoring Moderates the Effect of Intergovernmental Revenue on Local Government Financial Performance:** Funds from the central government known as intergovernmental revenue or balancing funds are used to pay for operational activities and their authority to reduce imbalances across regions (Sari, 2016). To promote decentralization and take into consideration local resources, the balancing fund uses a method for the equitable, transparent, democratic, fair, and fair distribution of monies (Julitawati et al. 2012). Due to the quantity of balancing funds granted, it is also necessary to require tighter monitoring of the number of DPRD members to accomplish community welfare and improve government financial performance. In order to verify that all public policies linked to balancing funds have been implemented in accordance with applicable laws and regulations, DPRD members must oversee this process as effectively as possible. Zea and Akmal (2015) demonstrate that monitoring reduces the impact of general allocative funds on regional financial performance.

**H<sub>5</sub>:** Political monitoring moderates the relationship between intergovernmental revenue and LG financial performance.

**Political Monitoring Moderates the Effect of Capital Expenditure on Local Government Financial Performance:** A budget output known as capital expenditure is used to purchase or acquire goods or services that the general public can use and benefit from (Masdiantini, 2016). The number of developments planned for the public benefit is a measure of how successfully LG has improved its financial performance through capital expenditure. To ensure that there are no variations in the allocation of capital expenditure realized for the welfare of the community, DPRD must be able to monitor the distribution of capital expenditures. According to Junita and Abdullah (2016), capital spending and the number of legislative seats are related. Members of the legislature, who serve as the people's representatives, have a say in whether or not LG policies are adopted. According to Suqri and Mardiamal (2016), monitoring effectively and favorably tempered the impact of capital spending on regional financial performance.

**H<sub>6</sub>:** Political monitoring moderates the effect of capital expenditure on LG's financial performance.

### 3. Research Methodology

In 2019, the district/city government in Indonesia received the applications. This investigation used Indonesia's LKPD district and city in 2019, due to ongoing issues with the district/city government's financial performance. The research information was gathered from BPK's official website, [www.bpk.go.id](http://www.bpk.go.id). Table 1 shows how to measure each variable.

**Table 1: Operational and Measurement Definition**

Variable	Definition	Measurement
Local government financial performance	Local government financial performance, proxied by the efficiency ratio. The efficiency ratio is an analysis in calculating the efficiency of expenditure funds by local governments (Mulyani and Wibowo, 2017)	$\text{Efficiency Ratio} = \frac{\text{Total Actual Expenditure}}{\text{Total Realised Receipts}}$
Regional wealth	The measurement of the level of regional wealth can be calculated by looking at the total PAD with total income (Qowi et al., 2017)	$\text{Wealth} = \frac{\text{Total PAD}}{\text{Total Income}}$
Intergovernmental revenue	Intergovernmental revenue is the transfer of funds from external sources, namely the central government, and there is no need to return these funds (Patrick, 2007).	$\text{IRGOV} = \frac{\text{Total Balancing Fund}}{\text{Total Income}}$

Capital expenditure	Capital Expenditure is measured using total capital expenditure consisting of land, equipment and machinery, building and construction, road, irrigation and network, and other fixed asset expenditures. This research was measured by utilizing it in the form of Log Natural (Log N) Masdiantini (2016).	Capital Expenditure = $\log N$ Total Capital Expenditur
Political Monitoring	Political monitoring is a legislative body which is an institution whose position is the administration of the government as a representative of the people (Law No. 23, 2014).	Political Monitoring = Number of DPRD members

#### 4. Results and Discussion

The population applied was the district/city government in Indonesia in 2019. This examines the utilized district/city LKPD in Indonesia in 2019.

**Table 2: Final Sample of the Study**

No	Research Sample Criteria	Total
1.	LKPD, which BPK RI audited in 2019	541
2.	LKPD consisting of Provinces in 2019	(34)
3.	Regencies/cities throughout Indonesia which did not issue LKPD in 2019	0
4.	Number of districts/cities throughout Indonesia which are sampled	507
5.	Outlier	(16)
6.	Total research sample	491

The data analysis method made use of the Smart Partial Least Square (PLS) program and Structural Equation Modeling (SEM). SEM analysis was chosen for the study, according to Dillala (2000), for a number of reasons, including the fact that the model under study is fairly complex, making it challenging to solve using the path method in linear regression, and the fact that SEM can estimate the relationship between variables that have multiple relationships. This study employs SEM analytic methodologies with the help of the SmartPLS program. PLS is a technique for information processing that works to handle unusual and complex data (Hair et al. 2014). In this study, data on the average, minimum, maximum, and standard deviation of each variable were acquired and described using descriptive statistics. The average value of the data gathered is anticipated to closely match the average value (Sekaran, 2006). While Nafi'iyah (2016) claims that the standard deviation is a technique to understand the diversity of a group.

**Table 3: Statistical Descriptive Analysis**

Variable	N	Min	Max	Mean	STD
Local Government Financial Performance	491	,5819	1,1007	,8649	,0864
Regional Wealth	491	,0039	,4117	,1098	,0742
Intergovernmental Revenue	491	,3789	,9161	,694	,0927
Capital Expenditure	491	25,1247	27,897	26,3376	,4985
Political Monitoring	491	20	55	33,839	10,039

According to the results of the descriptive data shown above, LG's average financial performance for 2019 is 0.8649, or 86.49 percent, which indicates that they are already performing well financially. Additionally, Indonesia's average district/city regional wealth in 2019 is 0.1098, or 10.98%, indicating that the local economy is underdeveloped. Intergovernmental revenue, an independent variable, has a value of 0.694, or 69.4 percent, indicating that the funds transferred by the federal government to LG have been allocated. The average district/city capital expenditure value for Indonesia in 2019 is then shown to be 26.3376, indicating that capital expenditures have been effectively realized. Lastly, the average value of political monitoring in

Indonesian provinces and cities in 2019 is 33,839, indicating that the DPRD's oversight has not been carried out as effectively as it could have. In this T-test, the degree of confidence of 0.05 is used to make decisions. The independent variable has a partial influence on the dependent variable if the significance level is less than 0.05 and the t-value is more than the t-table. The degree of confidence is 5 percent, and it is known that the formula  $df = n - k$  or  $df = 491 - 5 = 486$  yields the value  $t\text{-table} = 1.648$ .

**Table 4: PLS Path Algorithm and Bootstrapping**

	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values
RW -> LGFP	0.851	0.859	0.066	12.835	0.000
IRGOV -> LGFP	0.365	0.377	0.077	4.768	0.000
CE -> LGFP	0.197	0.200	0.053	3.682	0.000
PM*RW -> LGFP	-0.232	-0.233	0.068	3.403	0.001
PM*IRGOV -> LGFP	-0.111	-0.104	0.082	1.362	0.174
PM*CE-> LGFP	-0.049	-0.041	0.057	0.862	0.389

The processing of the data findings revealed that the regional wealth had a  $t\text{-value} > t\text{-table}$  (or  $12,835 > 1,648$ ) and a significance value 0.05 (or 0.000 0.05) as a consequence. These findings support H1; regional wealth considerably affects the financial performance of LG. The study findings are consistent with the agency theory, which argues that LG trusts residents to manage regional wealth for the benefit of the entire community. The findings of this study are consistent with a number of earlier studies, including those by Aswar (2019), Amalina and Sumardjo (2020), Samadara et al. (2021), Oktaviani et al. (2020), and Simanullang (2013), which found a strong correlation between regional wealth as measured by PAD and LG financial performance. Furthermore, it was discovered that the intergovernmental revenue had a  $t\text{-value} > t\text{-table}$ ,  $4.768 > 1.648$ , and a significance level of 0.000 0.05. These findings support H2; intergovernmental revenue has a major impact on the financial health of LG. The study findings are consistent with the stakeholder theory, which explains that the LG serves as the manager and receives transfer funds from the central government, which is the main stakeholder. The funds are then recognized as income and put to use in carrying out operational tasks that promote the sustainability and welfare of the local population.

The findings of this study are consistent with other earlier investigations into the impact of intergovernmental revenue on LG financial performance, including those by Noviyanti and Kiswanto (2016), Awwaliyah et al. (2019), and Ilmiyyah et al. (2017). The findings imply that intergovernmental revenue affects LG's financial health. In light of this, the capital expenditure exhibits a  $t\text{-value} > t\text{-table}$  or  $3.682 > 1.648$  relationship, with a significance level of 0.000 0.05. These findings support H3, which states that capital investments have a major impact on LG's financial performance. The study findings are consistent with the stakeholder theory, which claims that when a stakeholder—in this case, the community represented by the DPRD—grants the LG manager full authority to oversee and administer the government, it functions at its best. The findings of this analysis are consistent with a number of earlier studies, particularly those by Oktaviani et al. (2020) and Mulyani and Wibowo (2017), which found that capital expenditure had a considerable impact on LG's financial performance. The moderating variable, political monitoring, which modifies the association between regional wealth and LG financial performance, has a significant level of 0.001 to 0.05 and a  $t\text{-value}$  greater than the  $t\text{-table}$ , or  $3.403 > 1.648$ . These findings suggest that H4 is suitable.

Political surveillance, however, can reduce the impact of regional wealth on the financial performance of LG because of the unfavorable direction of the coefficient value. This suggests that the political monitoring variable, which is represented by the proportion of DPRD members who supervise with insufficient human resources, will lower regional wealth derived from the region's initial perception; consequently, a decline in LG financial performance will occur. The findings of this study contradict the stakeholder theory, according to which PAD issues arise because of insufficient oversight by relevant officials, particularly the DPRD, which has not exercised its oversight authority over a region's initial tax collection to the fullest extent possible. Undoubtedly, this will cause regional wealth to decline, which will then cause LG's financial performance to decline. The results of data processing on the moderating variable, namely the role of political monitoring in modifying the relationship between intergovernmental revenue and LG financial performance, show that the

t-value < t-table is  $1.362 < 1.648$  and a significance value of  $0.174 > 0.050$ , indicating that political monitoring is unable to moderate the impact of intergovernmental revenue on LG financial performance. According to these findings, H5 cannot be accepted or dismissed.

The distribution of balance funds owned in carrying out regional operational operations for the welfare of the community is not influenced by the level of oversight exercised by DPRD members, indicating that it has no bearing on the financial performance of the regional government. The results indicate that political monitoring or supervision carried out by the DPRD displays an average value that tends to be low, which is only 33.83 percent, rejecting the hypothesis when evaluated from descriptive statistics. Additionally, the incidence of accusations of bribery and game-playing against the balancing fund shows that interventions from different parties seeking personal advantage are made in the supervision of the allocation of the balancing fund, particularly for a number of LG projects. The stakeholder hypothesis holds that decisions about the distribution of balancing funds owned by LG should benefit the entire community for the benefit of the general welfare. This study does not support this notion. Additionally, the data processing results on the moderating variable, namely political monitoring in moderating the relationship between capital expenditures and LG financial performance, show a t-value t-table, i.e.  $0.862 < 1.648$  and a significance value of  $0.389 > 0.050$ , which indicates that political monitoring cannot moderate the effect of capital spending on LG financial performance. According to these findings, H5 cannot be accepted or dismissed.

This shows that the level of control exercised by DPRD members has no bearing on the distribution of capital expenditures made for the community's welfare and, as a result, has no bearing on the financial performance of LG. The hypothesis was disproved because it was supported by Tanzi and Davoodi (1997), which explained that DPRD members engaged in opportunistic behavior when overseeing the realization of capital expenditures. For example, they prioritized public investment, such as allocating capital expenditures for road or bridge construction over allocating capital expenditures for services like health or education. To receive a commission, this is done. Additionally, DPRD members frequently use the building of roads or bridges to carry out the legislative commitments they made to their supporters during the campaign (Usman, 2020). Members of the DPRD did this to advance their financial interests or self-interest. This study was not supported by stakeholder theory, which prioritizes the interests of stakeholders, namely the community in making decisions in the realization of capital expenditures for the welfare of the community at large. A large number of DPRD members may lead to information asymmetry in the realization of capital expenditures, where DPRD members only tried to provide benefits for some parties without considering services to the public.

## 5. Conclusion

The goal of this study was to investigate and quantify the impact of regional wealth, intergovernmental revenue, and capital expenditures on the financial performance of LG, with political monitoring serving as a moderating variable. According to the study findings, LG's financial performance is influenced by regional wealth, intergovernmental revenue, and capital expenditures. As a result, LG's financial performance will be influenced by the amount of regional wealth, intergovernmental revenue, and capital expenditures. The findings also indicated that political monitoring reduces the link between LG's financial performance and regional prosperity. This suggested that the level of oversight exercised by DPRD was less effective, would lower regional wealth derived from PAD, and would be followed by a decline in the financial performance of LG. Meanwhile, the impact of capital expenditures and intergovernmental revenue on LG's financial performance could not be moderated by political oversight.

It demonstrates that political oversight of intergovernmental revenue and capital spending has no bearing on LG's financial health. The report of audit findings (LHP) was presented in the scanned form in several districts and cities, so the figures are not visible and it is difficult to read. As a result, to check the notes on the government financial report (CALK) to make sure the numbers in the Budget Realization Report and Operational Report are accurate. The amount of DPRD members in this study, who must be able to access the official website of each district/city, made it difficult to measure political monitoring variables. The findings of this study suggest that additional independent variables, such as the size of the LG, leverage, and BPK viewpoint, which were not included in this study, should be considered in future research, particularly with

the financial performance of LG. Additionally, the balance of efficiency, independence, and economy can be utilized to assess the financial performance of LG in addition to the efficiency ratio employed in this study.

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## An Analysis of the Experimental Design of "My Money or Yours: House Money Payment Effects"

Abilio Henrique Berticelli De Freitas

Master Économie et Management Publics, Faculté d'Économie, Université de Montpellier, France  
abiliofreitas2@gmail.com

**Abstract:** Considering the expanding usage of experiments in Economics, the present article chooses one published paper in the area, dealing with the house money effect and analyzes it in a didactic way as concepts relating to the experimental design of lab experiments are evoked and discussed. In order to do so, three sections are outlined. First of all, the house money effect is explained and the article under scrutiny is placed in the context of what had already been done before; secondly, some of the experimental design concepts are summarised and then applied to soundly describe the experimental design of their experiment. Finally, after briefly presenting their results, there is an analytical overview of what has been done after their work and a personal take on possible lines for further research.

**Keywords:** *Experimental economics, experimental design, methodology, house money effect.*

### 1. Introduction

In light of the growing employment of experimental approaches to gain a better knowledge of Economics, one of the paramount aspects is designing the experiment well, so the expected effects can be captured, if, and only if, they exist. While there are several handbooks addressing experimental design in Economics, and also experiments or papers on particular features of it, no article, to the best of our knowledge, has taken one published article to review these concepts and see how they were - or were not - applied by the researchers. Doing so allows for a very didactic exposition of experimental techniques that can particularly benefit junior researchers aiming at gaining a greater understanding of hands-on Experimental Economics. Professors teaching courses within this realm are also expected to benefit from this paper for their lectures.

How do we apply experimental methods in practice to put in place effective, complete and parsimonious experiments? To answer such a question, our goal is to analyze Davis et al. (2010) while we present and briefly discuss multiple concepts as applied in reality. Although talking about lab-in-the-field in some moments, our scope is mainly limited to lab experiments. The article under examination talks about the house money effect, discussing the payment of show-up fees; our first section presents these two concepts. The second section reviews some of the main experimental design concepts, making use of them to scrutinize the article in question. The third and last section presents experiments done after theirs and suggests possible lines for further research.

### 2. House Money and Show-up Fee

To begin with, Davis et al. (2010) focus on one particular aspect of experiments: payment. Paying subjects is necessary to have credible results, as stated by Xu et al. (2018) which show that running an experiment using hypothetical money elicits less risk aversion as compared to real money; at the same time, the such difference also happens between smaller real incentives as compared to greater ones. Not only does behavior differ in hypothetical versus real choices, but Camerer and Mobbs (2017) were also able to show that brain activity often diverges from one scenario to the other.

Moreover, besides adopting real incentives during the experiment tasks, experimenters are also used to paying a show-up fee - in other words, a participation fee that is independent of the subject's performance. Normally, the latter accounts for 5 to 30% of the total compensation, the remainder being tied to performance in the activity. Guidebooks in Experimental Economics frequently overlook the timing of the show-up fee, as if this was a matter of less importance, but that is precisely the point Davis et al. (2010) propose to investigate.

Do most experimenters have the habit of paying the show-up fee upfront or at the conclusion of the experiment? To find out, Davis et al. (2010) got in contact with all authors whose articles were published



within the two most recent years in the journal they submitted theirs. Of the 18 experimenters that replied to them, 14 paid a participation fee (almost 80% of the responders), while, from these 14, roughly 85% paid only at the conclusion of the experiment (12 out of 14) and only two paid upfront, alleging habit or easiness as a reason to such a choice. In the end, is this just a detail or in fact choosing to pay upfront or at the conclusion of the experiment yield different results, specifically in risk-taking?

Thaler and Johnson (1990) consider how prior outcomes influence risk decisions. For instance, is winning a thousand dollars after hitting the jackpot in a casino perceived in a different manner as seeing, while you walk in the casino, that your stocks have gone up and you are a thousand dollars richer? If we were capable of always thinking only in terms of marginal costs, the answer would probably be a “no”. However, as, by and large, humans regard historical or sunk costs, the authors were able to prove, through experiments, that, under certain circumstances, prior gains can raise participants’ willingness to engage in gambles - labelled by them the “house money effect”. The expression comes from gamblers saying they are “playing with the house money” when they are ahead (either they win more or they go through reductions in gain instead of losses).

Further evidence of the house money effect has been gathered by several authors. Cárdenas et al. (2014) did an experiment where a group of participants received the endowment 21 days in advance and the other group received it on the day, they were going to take part in it. The authors found a small house money effect, in the sense that subjects who had less money with them during the experiment (because they considered the endowment previously received as part of their disposable income and had already spent a chunk of it) were more risk averse. There is evidence of a house money effect on professional traders as well, as attested by, among others, Frino et al. (2008). Analyzing data from the Sydney Futures Exchange, they observe a greater tendency to take risks when trading with profits rather than with initial capital.

On the other hand, Clark (2002) ran an experiment on the voluntary contribution mechanism for public goods with more than a hundred students divided into two treatments that were exactly alike except for the fact that in one of them (treatment O), participants were asked to bring their own money to fund their personal investment account (US\$ 8, to be precise, which was exactly their pay-off if they chose to invest all their money in the private good instead of investing it on the public one). Afterward, the US\$ 8 was returned, without previous announcement, to participants in treatment O as a participation fee, in a way that the earnings distributions of the two treatments would end up being equal. They found no evidence of a house money effect.

### **3. Experimental Design**

Davis et al. (2010) investigate the relevance of the timing to pay the participation fee in the light of the house money effect. To do so, they design an experiment to examine subjects’ willingness to purchase assurance information - its most common form being an audit opinion provided by accountants that reduce the variance of possible values for a good -, the idea being that more risk-averse agents would be more willing to snap assurance information up. The main result they find is that paying subjects the show-up fee upfront does lead to more risk-averse behavior: those participants were more prone to purchasing assurance information and to paying a fee to reduce variability when they had the option. Before diving into the experimental features of their article though, a summary of the most relevant aspects of experiment designing is called for.

Choosing the appropriate experimental design to apply is quite an art, as much as an architect making a plan for a building. Experimental biases must be avoided, while at the same time as we try to approach reality, we face constraints, relating to time, money, tractability, and ethics (to sum up three of the most important rules regarding the ethical aspect: real individuals, real incentives and no deception). We are supposed to choose the treatments we want to test and also use a baseline treatment or period for comparisons, to choose whether to do a between-subjects design (where each participant takes only one treatment). Or a within subject’s design (where the same participant undergoes more than one treatment), and do proper randomization before to make sure we will be able to discern a treatment effect if it exists. We also have to choose if we are going to do it in a laboratory, take the laboratory to the field (lab-in-the-field) or do a web experiment - the choice of the format usually implies a trade-off between control and external validity. We

also choose how we plan to analyze the data afterward, choosing the test's power we want to determine how big our samples must be and so on (Eber & Willinger, 2012; Jacquemet & L'Haridon, 2018).

Then, we should also consider if we want to observe actions (called the "hot" method) or if we want to observe strategies (called the "cold method"). The latter yields a wider range of data for analysis, while the former may be preferred in some cases if there is good justification for it to be used. Brandts and Charness (2000), using the Prisoner's dilemma and the Chicken game with undergraduate students in Barcelona, found no difference in behavior between the two elicitation methods. Such a result is in favor of the cold method since it allows experimenters to acquire more data at a low cost. Fast forward some years and both authors got together again to write a new paper on what the most recent decade of studies comparing the two elicitation methods had shown us. Surveying 29 studies, Brandts and Charness (2011) relate that in 16 of them there is no difference. Between the standard direct-response method and the strategy method. Four of them showed differences and nine of them presented mixed results. Situations involving punishment as well as situations with a lower number of decisions lead to a higher disparity between the methods, although the authors point out there may be a possible "publishing bias" - studies that do find an effect may be more likely to be published.

In addition, there are specific methods that attempt to elicit intertemporal preferences, such as the Multiple Price List or the Convex Time Budget; to elicit cognitive capabilities, such as the Cognitive Reflection Test; and to elicit social preferences, such as a trust game. More importantly in the context of the present paper, there are specific methods whose objective is to elicit risk preferences. Without entering into too much detail, there are experimental methods, such as the certainty equivalent, the choice of a lottery among a group of lotteries (Binswanger, 1980), comparing more and less risky lotteries (Holt and Laury, 2002), choosing a portfolio, i.e., the division between a less risky asset and a riskier one (Gneezy and Potters, 1997), and the bomb elicitation risk task (Crosetto and Filippin, 2013). There are also declarative measures that do not involve monetary incentives and genetic methods such as the 2D/4D ratio.

Finally, to finish up this short revision of experimental features, a paragraph on remuneration methods shall be written. Based on the assumption that subjects must be paid (the "real incentives" rule mentioned above), three questions arise. First of all, should all tasks be paid? No, according to Charness et al. (2016). They gathered evidence from previously published articles and, while mentioning potential risks existing in each of the two options, showed that overall, the evidence goes in the direction that paying only one randomly selected task is at least - and possibly even more - as effective as paying all tasks. Secondly, should all participants be paid? No, according to Clot et al. (2018). They conducted a dictator game in Montpellier using a control group (receiving full payment) and three treatment groups (one with hypothetical payment and two with random payment, subdivided into a high and a low stake group). The three monetarily incentivized groups presented similar transfer distributions and individuals were less selfish and more egalitarian when making hypothetical choices. Lastly, how can we learn about how participants make choices in real life if we cannot make them lose money? Ethics among experimentalists say participants have to be provided with an endowment to be used in the experiment - they cannot use their disposable income to participate. This generates the house money effect we are discussing in the present paper - after this detour; we are back where we left off. Demanding participants to do real-effort tasks at the beginning of the experiment to be able to get their endowment to play is one of the main solutions found until the present (Cárdenas et al., 2014).

In the experiment ran by Davis et al. (2010), subjects had the opportunity to buy a good whose value was comprised in the interval [40, 50], with equal probability for each one of the integers within it. Participants knew the distribution but had to decide whether to buy or not before knowing the actual value of the good. The price was fixed at the mean, \$45. Instead of using software or an online tool to choose randomly, the authors went old school: they used a bingo cage from which they drew a ball that determined the value of the good after the subject had made his or her choice. The game unfolds into 13 periods, the first five without the possibility of buying assurance information before choosing, and the last eight with that possibility on the table. An effort was made to hide the exact duration of the game to avoid differences between rounds due to a possible end-of-game effect.

They used a 2 x 2 factorial design, which means two variables were considered, the timing of the participation payment and the quality of information. The timing of the participation payment, as already explained, varied between one group receiving a lump-sum payment at the end of the experiment comprising both participation fee and experimental earnings, and the other group receiving the payment of the show-up fee upfront in cash - experimenters made sure that the second group had taken physical possession of the money, putting it in their pockets or purses. The variation in information quality, on the other hand, accounts for one group where subjects who choose to buy information are provided with the exact value of the good, and the other group where buying information reduces the range of possible values for the good, lessening its variance (in this last treatment, the information given to participants was the actual value 80% of the time and was less or equal to the actual value 20% of the time). The price set for this piece of information in the "certain treatment" is set at \$1.25, a bit below its risk-neutral value, \$1.36; in the "uncertain treatment", information could be purchased at \$1, equally slightly below the risk-neutral value, \$1.10. All decisions are private.

The goal is to test four hypotheses: (i) payment of the show-up fee upfront does not affect information purchase; (ii) information quality does not affect information purchase. (iii) information quality does not affect information purchase conditional on upfront payment of the show-up fee, and (iv) payment of the show-up fee upfront does not affect the rate at which subjects purchase the good without purchasing information before. The experiment was conducted on paper and pen at Michigan Technological University with 124 undergraduate students as participants, divided in a similar but not equal way among the four groups (making this a between-subject design). It lasted between 60 and 75 minutes and was paid to each participant, on average, \$8.38, with a range going from \$3.75 to \$12 - a simple calculation shows the total budget used for this experiment was over \$1000.

#### **4. Subsequent and Further Research**

Davis et al. (2010) showed that the timing of the payment of the show-up fee has an effect on risk-taking decisions, because individuals consider the upfront payment as their own money, while the payment at the end of the experiment is viewed as house money. In their discussion session, they wondered if this difference could be due to the upfront payment being unanticipated and, thus, viewed as a windfall gain, while a payment at the end could be viewed as part of the earnings of the experiment, turning the house money explanation upside down. This possibility goes hand in hand with the possibility of the terms "show-up fee" and "participation fee" until here used indistinctly, having different connotations. After all, are we talking about a fee to simply show up or about a fee to participate?

The authors further develop the recruitment process - another part of the experimental design - to reason that their focus was on the gains of income, not on its unanticipated aspect; it was clear from their announcements that there would be a \$8 fee just to show up. They confirmed that idea by running six more sessions, with an unannounced show-up fee this time: paying upfront leads to more risk-averse behavior regardless of whether or not the payment was previously announced. Luckily, we can continue to use "show-up fee" and "participation fee" as indistinct terms. Since that publication, a few articles have been published on the house money effect, some of which are commented on below.

Rosenboim and Shavit (2012) implemented a prepaid mechanism, in which the endowment was distributed to participants two weeks in advance of the experiment - the control group received it on the spot. Intuitively, that approach has a greater appeal than the one considered in the last paragraphs, since it gives participants some time to let sink in the idea that the money, they received is really theirs to play within the experiment - a distinction that is not so crystalline when it is just between the beginning and the end of the experiment, a time frame of an hour or so, instead of two weeks. They found evidence of the house money effect in the domain of losses, where participants who received the endowment in advance exhibited more risk-averse behavior - that is, the observed behavior in the experiment closer to the one they would exhibit in real-life situations, therefore making the experiment more reliable to understand real human behavior and to design better policies.

After them, Cárdenas et al. (2014), as mentioned in the first section, did a similar experiment, but using three instead of two weeks between the distribution of the endowment to the treatment group and the day of the experiment. They found evidence of a house money effect. Carlsson et al. (2013), in turn, validated in the field the difference between an earned endowment and windfall gains. They ran a dictator game at a Chinese university (laboratory) and a supermarket close to the university (field), applying one treatment in which participants' endowment fell from the skies and another one in which participants had to undergo a lengthy questionnaire in an effort to obtain their provision. Those who receive their money as a windfall gain, be it at the lab or in the field, presented a more prosocial behavior than others.

Other articles that rely on different games systematically find evidence of a house money effect (Danková and Servátka, 2015; Scrogin, 2017). On the other hand, Hackinger (2016) conducted a public goods game with German students - by the way, he used the Cognitive Reflection Test mentioned before to elicit cognitive skills -, being able to show that the house money effect showed up only for participants with low cognitive ability. While that result needs to be further replicated and its robustness verified, it is safe to say that, most of the time, researchers interested in understanding human behavior and policymakers focused on designing behaviourally informed policies, consider individuals as a whole - the exception being research or policy-making specifically focused on high-capability subjects.

Finally, in their paper, Hvidey et al. (2019) ran an experiment in South Korea using the Holt and Laury (2002) method to elicit risk preferences. Half of them would be endowed with a monetary stake upon arrival, and the other half would have to complete an effort task during half an hour to earn their endowment - either peeling potatoes or making envelopes. Besides their creativity to choose the effort tasks, the authors put some performance targets that participants would have to attain to be able to keep participating. Otherwise, they would receive the show-up fee and go home. They were told that their work would not be wasted - a point that will be left without further discussion here, but that is relevant to avoid the crowding-out effect. The pay was calibrated to be seen as slightly above a typical hourly wage in the country, but not excessively so, as to avoid the possibility of it being considered as a windfall gain. Results, at this stage, could be guessed: participants under the earned endowment treatment took less risk. The authors finish up their article urging experimenters to avoid small endowments and implement an "earned stakes" protocol, with the aim of getting closer to reality in their experiments.

Almost all of the comments on the experimental design used by Davis et al. (2010) were made as we went along, describing first what the house money effect and the participation fee were, then breaking down every single part of their experimental set-up to better understand it, using the concepts learned in experiment designing. The last step was to see what has been done since then to "improve" their work, or complement it. While results were often mentioned, since they are necessary to understand or to suggest the next experimental design to be used in the following experiment, the focus has always been on the experimental design. Now, without developing them extensively to not run out of our scope here, some ideas for future research arise.

For instance, both the idea of paying the endowment in advance and the idea of requiring participants to engage in an effort task to obtain their endowment are seen promising, as they allow experimenters to approach themselves more to reality, rendering the experiment itself more credible, not only to the scientific community but, in the first place, to those who take part in them. Nevertheless, one implementation that does not seem common but would be quite patent now would be to require participants to exert an effort task well in advance of the experiment to get their endowment. Imagine we combine the peeling potatoes task - by the way, they had to peel 25 potatoes in 30 minutes (is this even possible?) - with the experiment in which participants received the money three weeks before the experiment. By doing so, we could be almost sure participants would consider the money as theirs (the "sure" part comes, of course, by running experiments to validate that intuition).

We know that experimenters cannot make participants lose money in the experiment. More than an ethical point, making an experiment with potential losses could give room to a selection bias. What if, say, a trading company authorized researchers to run a field experiment with its traders, making it compulsory for every employee to take part in it? That by itself would solve the selection bias, while the ethical concern would be

solved by considering the endowment as part of the variable component of their wages on the next month (which normally depends upon the profits they make on trading operations) - in other words, they would be playing with their own potential money. Researchers would gain knowledge of behavioral biases in traders, while the company would benefit from the results to have a detailed view of how its own employees are prone to biases in their daily operations, which ultimately reduce profits.

Summing up, the ideas presented here consist of trying to bring experiments closer to reality. The first one does so by giving an earned endowment well in advance. It would also be important that the task used were as meaningful as they could be - worthless tasks sometimes used in the laboratory may not really convey the idea that the endowment is not a windfall gain any more than giving it without no task at all would. The second one reaches the outlined goal by allowing subjects to undergo losses, finding a way around the experimental rules set in place, since even though participants could end up with negative earnings from the experiment, not only would they have the fixed component of their income as usual, but they would also have the variable one coming from all the other successful trades to compensate for a conceivable loss. All in all, the house money effect can be overcome by using a real effort task detached from the experiment day, or by allowing participants to incur losses, using a way around to not break any rule.

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