

Transaction Cost of Black Market in the Region Timor-Leste Border

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Abstract

Timor-Leste's cross-border trade involves the people of the two countries on the border. Cross-border trade, which was originally facilitated by the government of Indonesia and East Timor by providing a common border market, has been closed since the Covid-19 pandemic. As a consequence, illegal transaction activities continue around the border with an unconventional approach and run outside the control of the state. The study aims to determine the effect of transaction costs, institutional changes, black markets on the welfare of people in border areas directly or indirectly. Explanatory research is a method approach used with PLS (Partial Least Square). The results of the study show that the direct relationship between constructs is positive, except that the transaction cost on welfare is negative. The indirect effect of transaction costs and institutional changes on welfare through the black market is positive. The factor of low transaction costs and changes in people's behavior and income causes the trading process to be outside the government's permit. Another supporting factor is the ease of accessibility in the form of proximity to mileage, means of transportation, and the similarity of economic needs. Black market practice is unlawful, and the state loses revenue.

Keywords: Transaction Cost, Institutional Change, Black Market, Welfare
JEL Classification: D60, F10

INTRODUCTION

The majority of border communities in Timor-Leste are dryland farmers with a slash-and-burn and nomadic livelihood pattern. Orientation of agricultural crops for household consumption and minimal market expansion. As a result, people's income is limited in meeting basic needs and other wants. The side effect is over exploitation of resources and impacts on social comfort and security in border areas. In relation to the situation and characteristics of poverty so that it does not become more acute, the government then places poverty as one of the fundamental problems and becomes the center of attention for prevention.

Since Timor-Leste chose to become independent as a sovereign state, the border area has experienced a shift in value as a strategic area from an economic and political perspective (Rato, 2019). In the economic field, border areas are the

door for economic development through trade and tourism (Oki et al., 2017; Dewi & Rachmawati, 2018). The prospect of trade between the two countries is positive, especially for the province of East Nusa Tenggara as a transit area. In the political field, the border is a display of the country's macroeconomic achievements. The development program is oriented towards the outskirts of the country. In the Nawacita program, the Indonesian President, Joko Widodo, remarked that border areas are the focus of the government's attention to alleviating poverty. The development of economic and other supporting infrastructure along the border area is intended to open the physical isolation of the community from poverty.

When the cross-border trade zone policy is implemented with the construction of economic facilities in the form of border markets and other supporting facilities such as banking, customs, immigration, and others, public enthusiasm is high in utilizing public facilities at the border to increase income (Chatfield et al., 2015). The development of trade in border areas is based on, among other things, the interests of increasing the population's economy. Economic pressure can force people to make illegal trade (Oki, 2019; Recher, 2020). However, the important thing is that socio-economic relations continue because they still have blood ties and cultural similarities. This means that the power of social capital is very dominant in establishing relations between communities (Fukuyama, 2001).

Border communities when the border market was still operating, some switched professions as traders with various businesses as money changers, culinary traders, souvenir traders, and even exporters. The institutional changes of some people from their initial profession as farmers have a positive impact on people's income and welfare. However, since the Covid-19 pandemic, the border gates of the two countries have been completely closed, and there has been no economic or other activity. The flow of people, goods, and services in and out of the two countries was originally very busy. As a result, the border market, which was originally opened at several points along the border, is not active.

The long period of time that the Covid-19 pandemic has hit seems like it will never end. Changes in community institutions to a new profession as a trader disappeared in an instant. The community experienced economic pressure due to trade activities that did not work, and they had to return to their old profession as dryland farmers (Stoker et al., 2021). A follow-up consequence is that people's incomes are reduced, and even poverty is threatening again. This incident then caused people to get bored and choose other alternatives as border traders with an illegal approach. The black market then becomes the best choice for the community even though it has the risk of violating the law as stated by Davidson (2007), that the black market is a transaction process for certain goods or services that are routinely traded in a way that is contrary to law or government regulations.

Black market follow-up factors can work due to the geographical location and proximity of settlements between communities. The overall borderline between the two countries along the island of Timor is approximately 279 kilometers. Especially for the borderline of the North Central Timor district with the Oecusi enclave of the Republica Democrate Timor-Leste (RDTL), which is 114.9 km long and there are 42 villages. In addition to geographical proximity, the people of the two regions still have emotional closeness due to the similarity of ethnicity, socio-culture, language, and other social life (Oki et al., 2017).

The majority of sellers come from the Indonesian people, and the people of Timor-Leste are buyers. The attraction of the public is interested in trading through the black market because the price is more affordable and it is not difficult to obtain even though it has legal risks in addition to having a kinship and wanting to help each other, but also because of the low transaction cost factor. According to Allen (2000), transaction costs are costs to negotiate, measure, and enforce exchanges. Furthermore, Williamson (1979) categorizes transaction costs into three broader sections, namely: search and information costs, bargaining costs and decisions or executing contracts, monitoring, coercion, and compliance costs. For black market processes in border areas, these costs do not exist.

The purpose of this research aims to analyze the effect of transaction costs, institutional changes, black markets on the welfare activities of the people of the border area. Since Timor-Leste's independence, the border area has been a potential area in encouraging the economic growth of the trading community. Since Covid-19, the border market has closed, causing people to look for other opportunities to enhance their income through illegal trade routes. Therefore, this research becomes a media of control and information for the government in managing the border area much better through security, empowerment, and community education approaches.

METHOD

The study was conducted in the North Central Timor district and focused on four sub-districts directly adjacent to the Oecusi district, namely North Insana, Naibenu, North Bikomi, and Nilulat sub-districts. Sources of data in this study are primary data originating from the community of black-market actors, security forces, and secondary data as supporting data from agencies related to border management. The population is all black-market players who are regularly in the border area totaling 109 people and spread unevenly in four sub-districts. The total population is 109 people spread over 43 people in North Bikomi District, 15 people in Naibenu, 36 people in Bikomi Nilulat, and 15 people in Wini. Because the number is limited, the population is also a sample in this study. The research instrument used was an interview using a questionnaire method. The analytical tool involved in data analysis using SmartPLS. Data analysis and structural equation modeling using PLS software (Abdillah & Hartono, 2015).

The first stage is designing a Structural Model (Inner Model). The Inner Model or Structural Model describes the relationship between latent variables based on substantive theory. The design of the Structural Model describes the relationship between latent variables based on the formulation of the problem. Second, Designing the measurement model (outer model). The outer model defines how each indicator block relates to its latent variable. The design of the measurement model determines the nature of the indicators of each latent variable. The latent variables in this study are social capital, cross-border trade, and institutional change. The relationship between indicators and latent variables in this study can be seen in the figure. The outer model or measurement model defines how each indicator block relates to its latent variable. Convert path diagram to system of equations. Third, estimation: weight, path coefficient, and loading. The parameter estimation method in PLS is the least square method. The calculation process is carried out by iteration, where the iteration will stop if the convergence condition

has been reached. Parameter estimation in PLS includes three things, namely: 1). Weight estimate is used to calculate latent variable data. 2). Path estimate that connects the latent variables and the estimated loading between latent variables and their indicators. 3). Means and location parameters (regression constant values, intercepts) for latent indicators and variables. Lastly, Evaluation of Goodness of Fit. Model is measured using R^2 dependent latent variable with the same interpretation as regression. Q^2 predictive relevance for the structural model measures how well the observed values are generated by the model as well as the estimated parameters.

The PLS method is a powerful method because it does not assume a data measurement scale and can also be used to confirm theory (Abdillah & Hartono, 2015). The advantages of SmartPLS start from being able to model variables to designing structural models (inner models) and measurement models (outer models). The relationship between indicators and variables in this study is shown in Figure 1.

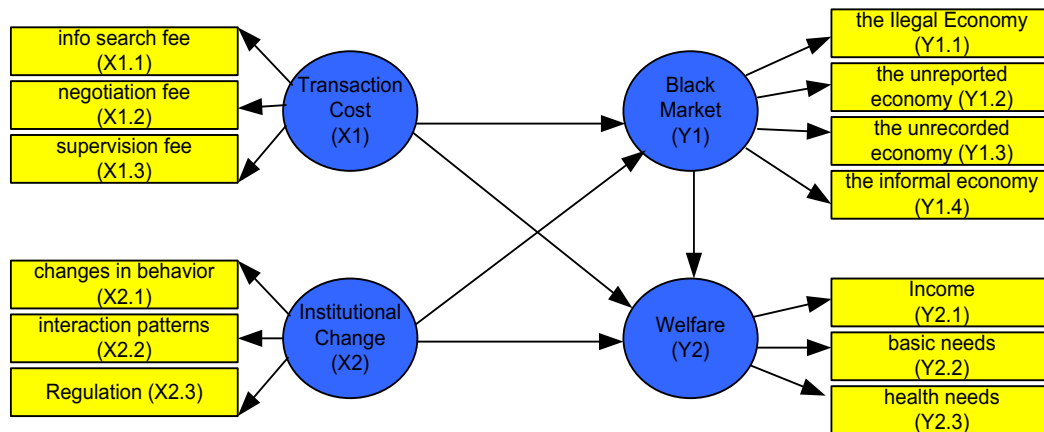


Figure 1. Relationship Between Constructs and Indicators

RESULTS AND DISCUSSION

The Covid-19 pandemic that has hampered the world, including Indonesia and Timor-Leste, is inseparable from the seriousness of the two countries in protecting the people with various regulations. The approach is in the health sector, such as massive vaccination and a social relationship approach. All approaches are based on regulations that all parties must comply with. The Covid-19 pandemic impacts not only health and safety but also all aspects of the socio-economic life of the community. The mobilization of border communities, which originally ran normally in trade, was closed due to fear of the increasing spread of the virus. The border markets that have been operating for a long time do not run normally and are only carried out by local Indonesian people without involving the people of Timor-Leste. This will certainly impact the income of border communities who have switched professions as traders with varied selling commodities, trading agricultural products, shop goods, industrial and electrical goods, culinary, money changers, and others. According to Sheth (2020), the Covid-19 does have not only an impact on health but also economic behavior. These changes relate to new rules and procedures in the way consumers shop and buy products and services. New habits will also emerge by technological advances, changing demographics, and innovative ways consumers have learned to deal with the blurring of work leisure

time. Meanwhile, according to Manig (1991), institutional changes are most influenced by regulatory factors, while behavior and patterns of community interaction are followed.

Various efforts have been made by border communities to increase income through trade activities with various approaches, even though it is not as flexible as before covid 19. Legally cross-border trade but trading activities continue to run with a risky legal approach, namely through the black market. The transaction process is limited to those who carry out activities in small communities as well as limited commodities. It is unavoidable that the accessibility factor makes it easy; the community still has kinship as brothers, the distance between community groups is very close, the border is only limited by roads, rivers, gardens. In addition, the two communities are difficult to distinguish because of their physical, linguistic, and cultural similarities.

Thus, the costs involved in establishing a relationship are minimal for both suppliers and consumers. The costs needed to seek information, build negotiations, build agreements or carry out supervision which is known as transaction costs, are minimal. The follow-up factor is the change in community institutions which is marked by changes in the behavior of the border community after Timor-Leste independence. Some people choose to switch professions as border traders. In a short time, the income level of the community experienced a significant change. In Egbert (2006) research on small-scale trade in the eastern and southern borders of Europe, entitled *Cross-border Small-scale Trading in South-Eastern Europe*, it was found that rational individual behavior is a new economic approach to small-scale trade at the border. This approach is considered better in building relationships in trade. What is meant by a rational approach is to open isolated relationships with social networks and social capital by approaching kinship, relatives, friends, acquaintances, or co-ethnics in the border market. The same thing also happened on the border of Timor-Leste. The people of the two countries have close kinship similarities in social, cultural, and economic life. According to Vipriyanti (2011), trust in other parties will strengthen the urge to cooperate if they have similar social and cultural backgrounds.

The results of the research on trade activities at the border can be seen in the flow of the relationship between the indicators forming the latent variable and between the latent variables directly or indirectly. The research results can be seen in the convergent validity showing the correlation between the reflexive indicator scores and the latent variable scores. Convergent validity can be seen through the value of the outer loading between the indicator variables and their constructs. The value of outer loading in this study is presented in Table 1.

According to Chin (2013), the value of outer loading is higher than 0.7 can be said that the indicators and latent variables have a high correlation, but if the outer loading value is 0.5 to 0.6, it is still considered sufficient. According to Abdillah and Hartono (2015), the higher the loading factor value, the more important the role of loading in interpreting the factor matrix. The results showed that the average outer loading value of the variable forming indicators (constructs) was above 0.7, meaning that it had a high correlation. Except for the information search fee indicator, the transaction cost construct is very low, and the regulatory indicator has an output loading value which is considered sufficient with a value of 0.51.

Table 1. Outer Loadings Indicators Against the Construct

		X1	X2	Y1	Y2
X11	Info search fee	0.238			
X12	Negotiation fee	0.697			
X13	Supervision fee	0.930			
X21	Changes in behavior		0.946		
X22	Interaction pattern		0.947		
X23	Regulation		0.515		
Y11	The illegal economic			0.936	
Y12	The unreported economy			0.926	
Y13	The unrecorded economy			0.917	
Y14	The informal economy			0.887	
Y21	Income				0.920
Y22	Basic needs				0.724
Y23	Health needs				0.883

Thus, it illustrates that there is a fairly high correlation between the indicator and the construct. Furthermore, the evaluation of the structural model (inner model) is a test between latent variables (constructs) to determine the relationship between constructs by looking at the values of R^2 and Q^2 . Based on the value of R^2 , the relationship between variables is categorized as “strong”, if the value of $R^2 > 0.7$, it is categorized as “substantial”, if R^2 is 0.67, it is categorized as “moderate”, if R^2 is 0.33, and categorizes “weak” if R^2 is 0.19 (Abdillah & Hartono. 2015). The R-Square (R^2) value of the SmartPLS test results in this study can be seen in Table 2.

Table 2. R-Square Value for Construct

	R Square	Adjusted R-Square	Description
Black market	0.747	0.741	strong
Welfare	0.894	0.891	strong

R^2 values for the black market and welfare constructs are above > 0.7 . This shows that all the constructs in the model are said to be good. The R^2 value of the black-market construct is 0.747. Thus, it shows that the black-market construct in the inner model is said to be strong, meaning that the black-market construct can be explained by the transaction cost construct and institutional changes of 74.7 percent, while other variables explain the remaining 25.3 percent. Meanwhile, the R^2 value of the welfare construct is 0.894, which is greater than 0.7, so it can be said that the welfare construct in the inner model is categorized as strong. The R^2 value of the welfare construct shows that this construct can be explained by the transaction cost construct and institutional changes of 89.4 percent, while other variables explain the remaining 10.6 percent. The direct effect in this research model is indicated by the path coefficient value, while the indirect effect can occur through the role of the intermediate variable (mediation/intervening). The majority of border communities originally worked as dryland farmers. Poverty and insufficient fulfillment of basic needs are experienced every year.

Changes in the behavior of some people occurred when Timor-Leste turned into traders when Timor-Leste became independent. Process transactions through official channels border markets. People's income increased. According to Diener

and Biswas-Diener (1992), the growth in per capita income which tends to increase, will generally lead to changes in people’s welfare. When looking at the changes in the community’s economic conditions, according to Danim (2000), it is called a prosperous society because material needs and social life are met. However, when the border market was closed due to the Covid-19, some people remained traders using illegal routes even though there were legal risks. This is similar to the research by Ama et al. (2013) in Botswana, which explains that goods traded at the border are manufactured goods that are traded legally but in practice minimize customs control by manipulating data on the number of units of goods and the weight of goods.

The total influence between variables can be seen through the path coefficients and SmartPLS output results. The direct influence between constructs in this study can be seen in the path coefficient values shown in Figure 2.

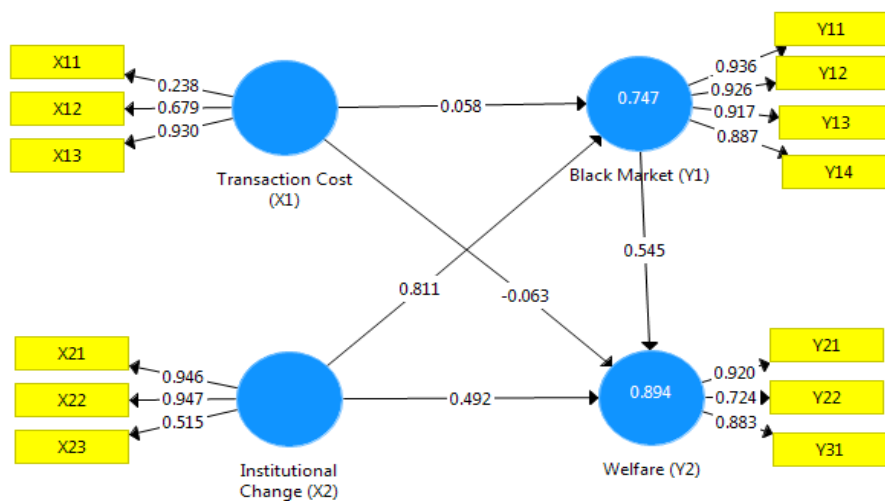


Figure 2. Path Coefficient of Relationship Between Latent Variables

From Figure 2, it can be seen that the direct effect reflects the direct relationship between one latent variable and another latent variable which is indicated by an arrow symbol. In this study, there are several direct effects that can be seen on the SmartPLS output in the form of a table of path coefficients. In more detail, the direct influence between construct variables can be seen in the results of the analysis shown in Table 3.

Table 3. Direct Effects (path coefficients)

	X1	X2	Y1	Y2
X1			0.058	-0.06
X2			0.811	0.492
Y1				0.545
Y2				

Based on the results of the direct effects inner model analysis in Figure 2, it can be concluded that the direct effect of the transaction cost (X1) on the black market (Y1) is 0.058, which means that if the transaction cost (X1) increases by one unit, the black market (Y1) can increase by 5.8%, and the influence is positive. The direct effect of transaction cost (X1) on welfare (Y2) is -0.06, which means that if

the transaction cost (X1) increases by one unit, welfare (Y2) can decrease by -6%. The direct effect of institutional change (X2) on the black market (Y1) is 0.811, meaning that if the institutional change (X2) increases by one unit, the black market (Y1) can increase by 81.1% and this influence is positive. The direct effect of institutional change (X2) on welfare (Y2) is 0.492, meaning that if the institutional change (X2) increases by one unit, welfare (Y2) can increase by 49.2%. The direct effect of the black market (Y1) on welfare (Y2) is 0.545, meaning that if the black market (Y1) increases by one unit, then welfare (Y2) can increase by 54.5% and this influence is positive.

The price of goods through the black market is more affordable because there are no additional fees and other taxes. Covid-19 has impacted government institutions through temporary rule changes with market closures and border entrances. This then causes changes in people's behavior through the black market. The current phenomenon has the same symptoms when the government has not provided a common market for the two countries at the border. This means that the presence of the border market has a positive impact in minimizing illegal trade practices. As Bwana's (208) research on informal cross-border trade in Tanzania, trade is growing rapidly and providing trade benefits, contributing to economic growth. It is further said that through trade, many people have overcome financial difficulties because it has given them the benefits of survival and being able to meet basic needs. In this regard, it is recommended that policy measures reduce the increasing number of informal trade barriers to increase the growth of the formal trade sector and expand more trade opportunities in the region and global markets. Furthermore, the indirect relationship (Indirect Effects) between exogenous variables and endogenous variables can be seen in Table 4.

Table 4. Indirect Effects

	X1	X2	Y1	Y2
X1				0.032
X2				0.442
Y1				
Y2				

The indirect effect of transaction costs (X1) on welfare (Y2) through the black market (Y1) is 0.032, meaning that if the transaction cost (X1) increases by one unit, welfare (Y2) can increase indirectly through the black market (Y1) by 3.2%. This influence is positive. Likewise, the indirect effect of institutional change (X2) on welfare (Y2) through the black market (Y1) is 0.442, meaning that if the institutional change (X2) increases by one unit, then welfare (Y2) can increase indirectly through the black market (Y1) of 44.2%. This influence is positive. This shows that the role of cross-border trade with a black-market approach impacts additional people's income. the government loses revenue through taxes but provides positive benefits for the black-market community. The indirect relationship between transaction costs and institutional change on welfare through the black market is positive. This shows that the role of cross-border trade with illegal practices even has legal implications but provides positive benefits for the income of black-market players. Therefore, government policies are needed to address these problems so that they do not negatively impact the future. according to Hart and Dymond (2006), the new trading model must have new policies to

minimize discrimination and violations, negotiate, enforce order and stability with rules and benefit all parties.

CONCLUSION

Cross-border trade initially ran normally due to community needs and was supported by government policies. Since the Covid-19 pandemic, restrictions on the mobility of the people of the two countries have been imposed for various activities. To meet the community's economic needs, the process of shifting transaction patterns from cross-border trade was initially facilitated by the government. However, in the course of Covid-19 and the closure of entrances and border markets, the transaction process turned into a black market again. The factor of low transaction costs and changes in people's behavior and income causes the trading process to be outside the government's permit. Another supporting factor is the ease of accessibility in the form of proximity to mileage, means of transportation, and the similarity of economic needs. Black market practice is unlawful, and the state loses revenue. This research is expected to be a study that will be followed up by the government in policymaking, especially border market management. We expect that this research will also be a follow-up study for other researchers to do more deeper study. This study lies some limitations. The data collection really depends on the honesty of the respondents, some people are afraid to give answers.

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