Effect of Commodity Exchange on the Economy- Prospects and Challenges

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Abstract

Commodity exchanges can play an important role in market development by increasing efficiency, reducing transaction costs, and providing price risk management tools. However, establishing and operating a successful commodity exchange in a developing country can be challenging. The key challenges include: small market size and lack of liquidity, weak infrastructure, lack of legal and regulatory support, lack of awareness and understanding of commodity exchanges among market participants, and government interventions that can distort market prices. Policy interventions that can be used to address these challenges and promote the development of successful commodity exchanges in developing countries include: providing financial support, developing the necessary infrastructure, creating a legal and regulatory framework, and raising awareness of commodity exchanges among market participants.

Keywords: Commodity exchange; financial market; stock market; securities and exchange commission

Introduction

Commodity exchange denotes a place where the buyers and sellers of commodities meet to perform their transactions (Rashid, 2015). It is a market where numerous buyers and sellers trade in commodity-linked contracts based on rules and procedures set by the individual exchange (UNCTAD, 2009). The transactions may take place with or without the exchange of physical commodities (Rashid, 2015). This means that the commodity exchange can be both a physical and a non-physical marketplace. Typically, it is a platform for trade-in futures contracts or standardized contracts for future delivery. In most the countries, commodity exchanges work in a wider range to stimulate trade. Other than the use of futures, instruments such as spot trades for immediate delivery and forward contracts in the form of warehouse receipts and repurchase agreements (repos) are also used in the commodity exchanges (UNCTAD, 2009). Those commodities are preferred in the market which fluctuate significantly within short period. Agricultural commodities viz., wheat and cotton (Hilferding, 1981) normally fulfill this condition. Commodity exchanges can enhance market efficiency by assisting to match the demand and supply of the commodities, over time and geographical distances, as they unite the buyers and sellers of physical commodities

(Belozertsev, Rutten, & Hollinger, 2011). Commodity exchange can be an important platform to market development as it decreases transaction costs, aids buyers and sellers determine appropriate prices for the commodities, and also decreases the risks due to price fluctuations (Rashid, 2015). Market transparency is boosted by supplying specific information on the certain type of demand through grading and quality certification (Belozertsev et al., 2011). Spots and futures are the common contracts in a commodity exchange. These contracts help to reduce price fluctuations by providing insurance against weather, seasonal production and other types of stocks. For emerging markets like Bangladesh, decreased price fluctuations are a pivotal aspect of stability in a growing trade. Commodity trading is a very old concept in Bangladesh. It has been taking place from early ancient times with Tibet and border towns of India such as Assam and North Bengal. Bangladesh has modem trade relationships with countries such as India, Bhutan, Nepal, and Thailand, and trading takes place in huge volumes (Hassan, 2000).

Scenario of Commodity Exchanges in Developing Countries

However, in a developing country like Bangladesh, establishing agricultural commodity exchanges remains a challenge though government-led and donor-funded initiatives have been taken (Rashid, 2015). In many African nations, commodity exchanges have failed due to a few issues like small market size, weak infrastructure, lack of legal support, underdeveloped financial sector, absence of regulatory framework, and unpredictable government market interventions. Many countries face similar problems especially due to the size and structure of the spot market, which is essential for the proper functioning of commodity exchange (Worku, 2016; Chowdhury, 2011). The success of commodity exchange depends on the volume of participants, their level of education and knowledge about the exchange. For example, in Africa, after launching of Ethiopia Commodity Exchange (ECX) in 2008, initially the number of coffee exports drastically declined from 133,998 to 47,629 tons. It happened as participants were not aware of the concept commodity exchange and its benefits (Worku, 2016). For example, futures contracts in commodity exchange can be very complicated and difficult for new traders to understand. In Russia, it was seen that the agricultural commodity traders and the local financial investors were the key players in the commodity derivatives market as they were more active and flexible in the implementation of their business strategies. Though, agricultural producers were inactive in the national derivatives market due to the lack of information on how to manage price risks by investing in agricultural commodity derivatives (Belozertsev et al" 2011). High volume of trade is essential to eliminate the chances of 'rings' being formed or the market 'cornered' for the establishment of a monopoly which would eradicate price fluctuations and speculations (Hilferding, 1981). Proper grading and sampling of the commodities is a key aspect of commodity exchanges as it can drastically impede the functioning of the exchange. A study in Ethiopia showed that 64.8% of the respondents were unhappy with the grading system of Ethiopian Commodity Exchange, due to bias, lack of accurate measuring equipment, and lack of proper knowledge (Worku, 2016). Rashid, Nelson, & Garcia (2010), stated that even similar commodities may differ in terms of moisture content, impurities, safety standards, and other features. Tradable commodities in the futures market must be subject to grades and standards of relevant attributes. Furthermore, exporters in Ethiopia faced problems regarding the quality and sampling representation of commodities especially when sesame seeds of different origins were mixed, because of which they faced difficulty in trading in a globalized environment (Worku, 2016).

Garcia, Irwin & Smith (2015) identified certain essential conditions for the development of commodity exchanges. They concluded that the nature of the commodities was important since some of the commodities have storable capacity while others do not. Storage is important to ensure a continuous supply. As "A contract can only be traded on a commodity exchange if both buyers and sellers are reasonably certain about the availability of special commodity at a particular date and location" (Kiriga, Njenga, Laibuni, Ikiara, & Omiti, 2012; Chowdhury, 2012), it is important to understand the nature of the commodity. Here the importance of the value chain also comes into question. Proper storage is one of the key components of the value chain. To enter into a global market and make the best use of globalization, it is beneficial to recognize factors influencing the whole value chain (Kaplinsky & Morris, 2000). The size and the level of activity in the spot market is another determining factor of a proper commodity exchange. The commodities listed in the exchanges are likely to be traded only if there is a large spot market, in terms of value and the number of market participants. A large volume of trade is needed to generate enough commissions to cover the costs of running the commodity exchange. The activity level of the spot market helps in providing information about various dealers and their inclinations to craft contracts and inform bids in the exchange (Garcia et al., 2015). If we look into the case of Kazakhstan, even in the most active exchanges like Kazakh International Commodity Exchange (BCICE) and Eurasia Trading Systems, the trade volume was due to low activity in the spot market. This was one of the reasons for the slow growth of commodity exchanges in Kazakhstan (Belozertsev et al., 2011).

Efficiency of a commodity exchange massively depends on sound physical infrastructure. It includes strong communication network as it helps to disseminate spot market information regarding product quality, quantity, and price to the traders. Emeni (2010) observed that the development of a commodity exchange is positively related to the availability of market information. Proper transportation and distribution system is also required to support the exchange so that the delivery location can be carefully specified in the contract. Good infrastructure such as roads can also support the exchange by linking various spot markets to one another. One of the main challenges the emerging markets face is the lack of physical infrastructure essential for smooth functioning commodity exchange (UNCTAD, 2009).

Success of commodity exchange also depends on the positive impact of macroeconomic factors. The world witnessed the extensive and widest commodity boom between 2003 to 2008. During this period, the prices of nominal energy and metal increased by a whopping 230% and the prices of fertilizers quadrupled (Chowdhury, 2015). Here, macroeconomic conditions were identified to be one of the factors that led to the increase in commodity prices. For example, low past investment in extractive commodities, weakened dollars, fiscal expansion, and loose monetary policies in many countries were some of the macroeconomic factors that led to the commodity boom (vander Mensbrugghe, Osorio-Rodar, Bums, & Baffes, 2009). For example, the commodity exchanges in Kazakhstan, which started in the 1980s, experienced severe macroeconomic and structural hurdles in the late 1990s and 2000s after which only 15 registered commodities survived (Belozertsev et al., 2011). Another example is the Zimbabwe, where commodity exchange became unattainable due to hyperinflation caused by unsound monetary management (Garcia et al., 2015). Relentless intrusion by the government can also hinder the functioning of commodity exchanges. Export bans and other interventions to reduce price fluctuations could also undermine the commodity exchanges, especially if these rules are randomly implemented or only for specific purposes. In Kazakhstan, a state-owned food corporation had a major influence on the domestic grain markets and thus giving a strong influence on the domestic grain prices (Belozertsev et al., 2011). In Russia, the intervention came in the form of strict commodity market regulation and a tax increase (Maximchook, 2013).

Farmers most often face challenges with the production and marketing of their products. Lack of necessary knowledge on proper storage facilities, incur them heavy fosses due to their harvest damage caused by pests and fungal infestations. Again, without proper road infrastructure, the farmers may not be able to transport or market their produce. In Nigeria, inadequate infrastructures such as access roads and lack of standard price measure for the commodities made huge financial and post-harvest fosses (Nigerian Pilot, 2016). Small farmers may also lack market information therefore they may not be able to determine the price at which to sell, whom to sell, and at what time to sell. Establishing a commodity exchange may resolve some of these problems faced by the small farmers. Seeger (2004) noticed that commodity exchange helps to shift from agricultural sector to higher levels of success. In India, the Multi Commodity Exchange of India Limited, aims at helping rural farmers market their produce (Team YS, 2011). Price transparency and efficiency are enhanced within a commodity exchange due to the participation of a large number of buyers and sellers (Surana, 2015; Chowdhury et al., 2023). Trading in terms of futures rather than spot transactions increases the likelihood of reaping returns. It also reduces intra-seasonal volatility (The Herald, 2012). Farmers can also enjoy indirect benefits as well as they do not have to trade in the exchange. If they are aware of the exchange prices, they are able to bargain better prices for their produce later on. Also, they can decide on which crops to sow and when to sell by identifying which crops are demanded at what time (Surana, 2015). Commodity exchange ensures transparency and thus reduce the risk of trading agricultural products to a significant extent. Being the most volatile commodities in the exchanges, they are prone to price trajectory. By trading in futures, farmers can avoid serious fosses whenever the prices fall (The Herald, 2012) as intra-seasonal volatility is one of the major risks that farmers face. The availability of transaction rules ensures the integrity of member companies who are brokers in the exchange (The Herald, 2012). Also, by imposing proper framework and rules, the exchange can ensure the confidence of buyers and sellers to transact. Proper rules and procedures also protect the participants from dishonest practices by the exchanges, counterparties, or intermediaries that they might interact with (UNCTAD, 2009). Commodity exchange helps to reduce transaction costs as the services are provided at much lower than the regular trading platforms. Costs related to finding a suitable buyer or seller, negotiating terms and conditions, securing finance, managing credit, cash and product transfers and settling disputes are some of the costs that commodity exchange reduces (UNCTAD, 2009). Moreover, • Intervention of arbitrator in settlement of disputes shortens the time than it requires in regular court process. The warehouse receipt system allows the farmers to deposit their produce in registered warehouses hereby reducing post-harvest fosses and providing storage facilities (The Herald, 2012).

A well-functioning commodity exchange may work as a hub for fairness and equity in trade. The regulatory framework of commodity exchanges should be formed in such a way that it does not allow their participants to be exploited by the people they have to deal with. For example, in the case of African farmers, due to fragmentation, the farmers were exploited by the intermediaries from private traders to public marketing boards. Since Africa's markets tend to be so disorganized, the intermediaries used it to their advantage. Some of these intermediaries were the only purchaser from the farmers, and because of this lack of competition, the fanners had no choice but to take whatever price was offered (Chowhdury et al., 2022; Mukami, 2014).

Pre-requisites for a Sound Commodity Exchange

Inclusion of Farmers

Most of the fanners in Bangladesh have small holdings and thus their tiny productions have insignificant impact on the development of commodity market. If small farmers are engaged in the commodity exchange network, the combined productions help to establish a smooth and sizeable commodity market.

Warehouse Facilities and System

Every commodity exchange should be supported by a strong warehouse storage facility. Properly managed warehouse facilities allow farmers to safely store their harvest without worrying about loss of value until market prices are favorable. The commodities exchange authority will have to set up a chain of networked warehouses throughout the country. Every crop surplus area will have a major warehouse (Chowdhury and Reza, 2013). These warehouses will also assess the quality and weight of the products.

Quality, Grading and Standardization of Products

The products which will be traded in the future markets should maintain the prescribed national grades and standards. Though standardizing all the products is a major challenge, suppliers, traders, exchanges and other parties should work together to frame a comprehensive work program to develop required contracts.

Information and Communication Infrastructure

We know, transmitting the right information in the right time to the right person is the main role of ICT. Though Bangladesh is encountering different challenges like poor infrastructure, qualified manpower, power shortage, bad roads and highways etc., it is expected that a combined effort, can overcome the bottlenecks and create a smooth platform to deliver necessary information services to ensure decision making in the right time (Chowdhury and Begum, 2015).

Clearing House

A commodity exchange should have its own clearing house. The commodity exchange will put into place a two-tiered clearing system, with the exchange clearing its own members and the members clearing their respective clients. The exchange does not directly carry out clearing activities on individual clients. All members of an exchange are required to clear their trades through the clearing house at the end of each trading session and to deposit with the clearing house a sum of money (based on clearinghouse margin requirements) sufficient to cover the member's debit balance Because all members are required to clear their trades through the clearing house and must maintain sufficient funds to cover their debit balances, the clearing house is responsible to all members for the fulfillment of the contracts and provides insurance by honoring the contract.

Settlement Mechanism

The Commodity Exchange will set into practice the same-day debt-free clearing system, popularly known as daily mark-to-market system. Upon the completion of the day's trading, the exchange will, according to the day's settlement price, settle the profits and losses, trading margins and other fees for all contracts. The amounts payable and receivable will then be transferred to and from the corresponding member settlement reserves.

Delivery System

There should have physical delivery system in a commodity exchange. Physical delivery is a method in which both parties to a contract must exchange ownership rights to the commodities listed in all contracts that have not been offset. Individual customers are not permitted to give or receive delivery.

Impact of Russia-Ukraine War on the Commodity market

The commodity prices across the globe have increased severely due to the on-going Russia-Ukraine war. During the last week, oil prices rose by over 30% and European natural gas prices by more than 60%. Food and metals prices also increased. These upsurges came on top of substantial price gains in 2021, moving prices well above pre-pandemic levels. Although prices have since retreated somewhat, they remain high by historical standards. As the war continues, the position of commodity markets is terribly uncertain. Mounting commodity prices went hand in hand with the threat of major supply disruptions (Chowdhury and Nahar, 2017). Russia and Ukraine play vital role in many commodity markets. Both the countries account for over 10% of global wheat and oil production, and more than 20% of the world’s natural gas. Russia is a major supplier of metals which are used to manufacture aircraft, cars and computer chips. A shortage of these metals could lead to an intensification of bottlenecks. Meanwhile, the war has disrupted agricultural supply chains. Such disruptions could multiply, not least due to the destruction of crops and physical infrastructure. Additional restrictions on Russia could further disrupt the supply of energy commodities, at least to some markets. The global economy has become risky due to high and volatile commodity prices. The consequences will be reflected on both inflation and growth, and will fall disproportionately across countries, depending on whether they are exporters or importers of affected commodities and how higher prices affect household and corporate income. In fact, higher commodity prices are likely to stop growth and lift inflation in the short term. The

1970s economy may be repeated when rising oil prices contributed to the most pronounced stagflation episode of modem times -depends on how long the commodity market disruptions continue, and whether macroeconomic policy manages the fallout more successfully than in the past. Already, a few signals are emerging. Unlike 1970s, current commodity price rises somewhat reflect lower available supply. These symptoms could intensify if the reduced supply of fertilizer shrinks global crop yields and sanctions tweak the flow of energy commodities to global markets. At the same time, there are reasons to think that recent commodity price increases could be less disruptive than those of the 1970s. The inflationary backdrop, in particular, is less threatening. The 1973 oil crisis followed several years of rising inflation. And inflation was very high in the years leading up to the 1979 crisis (Chowdhury and Chowdhury, 2022). Although global inflation has risen substantially over the past year, it was low for several years before that. As a result, high inflation is likely to be less ingrained in the minds of households and firms, which could limit the spillover of higher commodity prices. Now-a-days, economies are less energy-dependent. The energy intensity of GDP - the amount of energy consumed relative to the total volume of goods and services produced - has fallen by around 40% since the late 1970s. The drop has been very prominent for oil, for which consumption per unit of GDP has more than halved. Few of the declines reflect a shift in energy use from oil to other fuels, such as gas. But even for these fuels, total consumption per unit of GDP has declined. As a consequence, higher energy prices matter less for growth than in the past. At present, policy frameworks are more robust. The 1970s oil crisis was in line with the collapse of the Bretton Woods system. Monetary policy targets and reaction functions were ill-defined in many countries. At present, most central banks have more coherent policy frameworks, allowing them to successfully navigate several large commodity price spikes since the 1970s. Finally, the change in commodity prices depends on whether a country exports or imports the commodities involved.

Impact of Commodity Price on the Microeconomy

Commodity price increases for different reasons. Growing global demand, shortage of supply, geopolitical tension, changed production patterns, terms of trade effect are a few reasons for higher commodity price. Higher commodity prices affect macroeconomic conditions through several channels. The primary impact is reflected in inflation. Some commodity prices such as oil and wheat are closely linked to the prices of consumption goods such as gasoline and bread. Others for example metals are key production inputs. The cost of the firm increases due to inflation and price hikes of raw materials, which they ultimately pass onto consumers. Increasing inflation promptly turns a monetary policy response that lowers growth. Higher commodity prices lead firms to substitute away from expensive inputs towards other production inputs such as less efficient energy sources, which could impose on growth in the short run, with implications for investment. The impacts of these factors are hypothetically larger if higher commodity prices result from a reduction in commodity supply, mainly if the resulting policy response involves economic distortions for example rationing. Higher commodity prices offer a real income hike for commodity producers and a real income drag for commodity importers. The growth depends on the income changes accrue to firms such as profits, households such as wages or governments such as tax revenues.

Linkage between Commodity Supply and Economic Growth

Higher commodity prices cut growth on average by an economically meaningful margin. The consequences are particularly large when increased commodity prices reflect lower commodity supply, as in the 1970s oil crises. Gurung, Choden, Daly & Singh (2021) estimate that a 10% rise in oil prices driven by lower global oil supply lowers the level of GDP for the average advanced economy by around 0.5% after two years. On the other hand, a 10% oil price rise unrelated to changes in oil supply or aggregate demand would lower GDP by less than 0.2%. In the emerging economies, the output effects of higher agricultural commodity prices are greater than those of oil prices. In reality, they imply that commodity price increases since the start of the year could reduce GDP in major advanced economies by around 0.7 ppts by the end of 2023. Although, the effects of higher commodity prices fluctuate between commodity importers and exporters. In general, for pure price changes, higher commodity prices lead to a modest rise in output in commodity exporters and a larger decline in output in commodity importers (Chepeliev, Hertel, & van der, 2022). Drops in commodity supply, on the other hand, are tightening for both sets of countries. A comprehensive verification of the expenditure and income flows sheds light on the transmission of commodity price movements (Chowdhury and Rozario, 2018). In case of import of commodity, higher commodity prices are explicitly negative for both households and firms. Maintaining a normal pace with lower economic activity and higher inflation, real wages and profits decline. In this circumstance, both consumption and investment fall together. The movements of commodity exports are quite different. Mohtadi & Castells-Quintana (2021) noticed that higher commodity prices boost profits and investment while wage income declines on average while consumption barely responds. The conflicting implications for firms and households perhaps replicates the capital-intensive nature of commodity production, at least in advanced economies. In the short run, the effect of commodity price is very insignificant

Linkage between Commodity Prices and Inflation

Commodity prices are considered as a leading indicator of inflation through two basic channels. Leading indicators often show measurable economic changes before the economy as a whole it does. One theory suggests commodity prices respond quickly to general economic shocks such as increases in demand. The second is that changes in prices reflect systemic shocks, such as hurricanes which can decimate the supply of agricultural products and subsequently increase supply costs. By the time it reaches consumers, overall prices would have increased, and inflation would be realized. The strongest case for commodity prices as a leading indicator of expected inflation is that commodities respond quickly to widespread economic shocks. Abaidoo & Agyapong (2022) observed that the inflationary effects of higher commodity prices are not confined to energy and food prices. In real sense, core inflation rises by only half as much as headline inflation. These spillovers are typically larger for commodity importers; the rise in core inflation for commodity exporters is very mild and statistically insignificant. One possible reason is that commodity exporters' exchange rates tend to appreciate in the wake of higher commodity prices, which lowers import prices. Systemic shocks are reflected in the changes in prices, such as hurricanes which can decimate the supply of agricultural products and subsequently increase supply costs. By the time it reaches consumers, overall prices would have increased, and inflation would be realized (Islam and Chowdhury, 2017). The strongest case for commodity prices as a leading indicator of expected inflation is that commodities respond quickly to widespread economic shocks.

Challenges

Being a agri-based economy, it is expected that commodity market in Bangladesh will be dominated by agri-products. In an emerging economy like Bangladesh, farmers nominally face two problems, one is lack of labor force and the other one is small size of land. Majority of the farmers face difficulty in producing large volumes as they either lack sufficient number of farmhands or the required farm size for large-scale production. Hiring people to work on their farms may be a probable solution. However, the cost of hiring labors and the availability will be added challenges.

Bad weather is another major problem that imped large-scale production for the farmers. Heavy rainfall, excessive heat, frost, and hailstones are some of the natural climatic forces that farmers are continuously fighting. Sudden changes in the temperature were seen as a major concern for the farmers. Damages by wild animals such as cows, goats, birds, rats, and mice are also seen as one of the limiting factors to the large-scale production of agriculture commodities. Many commodities traders rely on cash a lot longer than needed. Large or relatively established traders recycling their own fonds, as they have not explored the various solutions on the market. Much of this is due to distrust and perceived slow speed. Sometimes large banks or funders are inadequate in addressing the needs of certain clients. While another fonder may be more than happy to quickly amend facilities and increase limit sizes. This reason for this mismatch mainly focuses on working with the right person and understanding both the lender and borrowers' requirements. This includes security, products and cycles. This is always changing. Large banks fund the way they plan. This is troublesome as the fond suppliers and users may not agree on different issues. It is very difficult to estimate actual requirements of a massive organization as their demand varies significantly.

Sometimes the wrong facilities are used and certain elements are not known about. This is due to funders providing the wrong solutions and a business not having long-term plans in place. There may be trades that a company use their own cash for, which can fit into a facility. There may also be no pre-export finance facilities used, alternative repo structures or receivables finance wrongly utilized when an alternative structure could be more beneficial. Security is sometimes asked for when it shouldn't be; this can be negotiated out of and used in various ways. By providing security when not necessary, this could be disadvantageous in the long run. It may be easy for certain companies to set up in more favorable jurisdictions or trade with alternative countries. This may be advantageous when looking at the companies' long-term growth. The fonder and client relationship should be one of partnership in growth as it is in both of their interests to make this work. It is too often thought of as a struggle where difficulty is often found.

The lack of proper storage could also have a major implication for the smooth functioning of commodity exchange in Bangladesh. A continuous supply of commodity exchanges allows for meeting the demand and supply requirements and is ensured if there are proper storage facilities. Fanners cannot marketize their crops properly. The first difficulty in marketing is price discovery. Many times, the price discovery is through word of mouth of other market participants such as other farmers, vendors, or agents which may not be the most reliable source Price inconsistency among the suppliers. The farmers usually find out the prevailing price of the crops from the focal market and then determine prices for their crops which may not be the same as the one prevailing in the market and they incorporate the input cost in their prices. This creates inconsistency in the prices of the same crops from different farmers. When asked if the farmers were satisfied with the prices they got for their crops, the majority of them indicated that they did not. For cardamom and oranges, the dealer and agents come to the farmers directly and then offer the farmers different prices. The farmers have to pick the best price and then decide whom to sell to. Since there are many sellers and buyers at the auction yards, the intensity of competition is extremely high. Commodity exchanges can play an important role in disseminating market information of agricultural commodities to the Bangladeshi fanners so that there will be consistency in the prices of agricultural commodities (Sehgal, 2012).

Price changes are especially common in agricultural commodities due to the high demand and supply variations. Usually, price changes occur three times in a season for many of the vegetable crops. The first price change happens at the beginning of the season when the demand for newly harvested crops is high. The second price change occurs during mid-season when the supply in the market is very high. Finally, at the closing of the season the supplies decrease again and the prices go up. This is common for all focal seasonal crops in Bangladesh if the majority of the Bangladeshi farmers had cold storages when they would be able to sell their crops even during the off seasons which could eliminate drastic price changes.

Finding buyers is another major challenge. Willingness to purchase and price are constant issues, especially when outside of major towns. In Bangladesh, farmers need to wait for days to finish selling their crops, and by this time, more than half of the vegetables get ruined. Transportation cost is another common problem for the majority of the Bangladeshi farmers. Major landslides along different trade routes cause heavy damage. Since the vehicles used for transporting the commodities do not have refrigeration facilities, spoilage quickly occurs. Poor road infrastructure is prevalent throughout the country and somewhere animal transport is common, taking them anywhere from one hour to one day from the closest road. Lack of sufficient warehouse facilities. Warehouses are one of the key features of commodity exchanges. The warehouses are usually set up strategically throughout a trading area so that it has a maximum reach to all the major markets. Since Bangladeshi farmers are having difficulty accessing the markets, a finalized commodity exchange through its warehouse capabilities could be able to help the farmers sell their harvests. For example, in Ethiopia, ECX with the help of its warehouses was able to connect different regions. In turn, this reduced transfer costs associated especially with coffee trade (Gabre-Madhin & Goggin, 2005).

Bangladeshi farmers are exposed to many challenges that occur before and after the harvest of their crops. The first is the pre-harvest challenges, which usually affect productivity, are lack of labor force, small farm size, bad weather conditions, and damage to crops from wild animals. The second is the post-harvest challenges, which is mainly associated with marketing of the commodities, includes initial difficulties in storage, price discovery, price fluctuations, the difficulty of finding customers, and lack of market accessibility and high transportation costs. Though commodity exchange will not be able to help the farmers with the pre-harvest challenges, it will help the farmers tackle many of the post-harvest challenges.

Conclusion

Commodity exchange enables trade by matching buyers and sellers. This is such a platform for trades where futures contracts or standardized contracts are used for future delivery and hedging. Bangladesh is exposed to challenges like damage to crops from bad weather conditions, wild animals, lack of farmhands, and small farm size. Post-harvest challenges consist of proper storage, price fluctuation, difficulty to find buyers, lack of market accessibility, and the difficulty of getting price information. All of these post-harvest challenges may be addressed by establishing a well-functioning commodity exchange. The success of a commodity exchange depends on three preconditions namely, the volume of production, infrastructure, and potential participants of the exchanges, are essential to the development of commodity exchange. The potential participants of commodity exchange such as farmers, cooperatives, vendors, and agents should have a positive attitude toward the idea of commodity exchange. By considering overall readiness, it may be concluded that commodity exchange is viable in Bangladesh and further research on challenges will help policymakers to frame appropriate strategies to make commodity exchange perform even better.

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