ResearchGate

See discussions, stats, and author profiles for this publication at:
http://www.researchgate.net/publication/264943101

Understanding market failures in an economic development context.

BOOK · JULY 2011

DOI: 10.13140/2.1.4734.6562

CITATION
1

DOWNLOADS
11

VIEWS
44

1 AUTHOR:

Shawn Cunningham
Vaal University of Technol…

7 PUBLICATIONS **1** CITATION

SEE PROFILE

Available from: Shawn Cunningham
Retrieved on: 15 September 2015

Creative Commons Licence

You are free:

to share — to copy, distribute, display and perform the work

Under the following conditions:

Attribution. You must attribute the work to the author and to mesopartner (but not in any way that suggests that they endorse you or your use of the work).

For any reuse or distribution, you must make clear to others the licence terms of this work. The best way to do this is through the link to www.creativecommons. org

Any of the above conditions can be waived if you obtain permission from the copyright holder.

Nothing in this licence impairs or restricts the author's moral rights.

Pretoria, 2011

Mesopartner Monograph 4

Edition 1, July 2011

Pretoria, South Africa

Front cover illustration by Lina Stamer

Understanding market failures in an economic development context

Dr Shawn Cunningham

Foreword by the author

This publication is the completion of a process that I started with the late Dr Jörg Meyer-Stamer in 2008. Sadly, Jörg passed away in May 2009 before we could do much work on this specific publication. We agreed to hold back this project so that I could finish the research for my PhD that looked into market failures.

One of my and Jörg's favourite topics for discussion was market failures. We both brought very different experiences and perspectives to this debate, and my academic research benefited greatly from the debates and coaching from Jörg. We frequently presented sessions together at training events which were important opportunities for us to further refine and synchronise our thinking. In many parts of this publication I have used some of the texts that we developed together, but in the interim I have also gained some additional insights.

The completion of this publication is one small task on a to-do list which I started in 2005. Future publications will revisit the use of the Systemic Competitiveness framework to diagnose and address market failures. This publication is targeted at practitioners who are working in and around the field of market development. It should not be seen as an introduction, but more as a technical publication directed at people who are trying to solve problems in a practical way based on a deeper understanding of market system. In many instances I have decided to cite only references to the many gurus who have done so much work on this topic before me. After the last chapter I have provided a list of popular books that readers can consult if they wish to read more about the phenomenon of markets and their role in societies.

Dr Shawn Cunningham

Contents

List of Tables

Chapter 1 Introduction

In development cooperation, the topic of markets has received a great deal of attention over the past 20 years. The main purpose of the structural adjustment programmes that were launched from the 1980s onwards was to remove distortions that stood in the way of the emergence of functional markets in developing countries. In the 1990s, the promotion of small business went through a paradigm change with the evolution of the BDS (business development services) approach which emphasised the development of BDS markets rather than the substitution or crowding-out of markets through government interventions. Although many people associated this change mainly with donors, there was a global trend towards a more liberal approach to government interventions. In the early 2000s, some donor organisations introduced the *Making market systems work for the poor* approach, expanding the scope of the developing markets approach from BDS to the wider compass of markets and later to economic sub-systems.

Many scholars have argued that markets remain the most efficient way to coordinate transactions in societies simply because of their decentralised nature and the self-interest of the actors involved. One of our favourite authors on the topics, John McMillan, once said that markets are so easy to create that they emerge spontaneously everywhere – even within humanitarian camps or prison cells. In the last few years a whole series of books have been published that have shed more light on market systems (see Recommended Reading at the end of this publication).

If markets can emerge so spontaneously, and if they are so good at allocation of resources, then why are we treating them as if they

are a problem and not a solution? Why are markets in developing countries often underperforming, or do not exist at all? And why would markets work in countries such as Somalia, where there is hardly a functioning government in place?

Markets cannot be separated from the societies and systems in which they are embedded. Many of the underlying issues within a society will be reflected through the performance of its market systems. To give an example, in many Asian societies it is fairly common for shoppers to negotiate fiercely with traders until a price is agreed upon. In South Africa and surrounding countries, people find this kind of behaviour rude and greedy. Are these characteristics of the market, or values of the society?

The role of governments and international development organisations in markets has changed over time. In the early days of development aid, half a century ago, it was a widely accepted fact that many markets in developing countries did not work properly, and that in particular there tended to be a low-level equilibrium that created structural barriers to growth for low-income countries. The high degree of state intervention in the economies of developing countries was not only due to the fact that many governments of developing countries flirted with socialism, but also due to the fact that for some time even such agencies as the World Bank assumed that government intervention was necessary because markets could not work properly. The renewed interest in markets that marked the past two decades reflected the fact that government intervention gave rise to government failure. So the pendulum swung back. In the presence of weak states and weak markets, donor organisations suggested that it was more likely that markets would work at some level of effectiveness than

government. This was despite the fact that many of the reasons why markets did not work 50 years ago are still valid today.

In this publication, I do not intend to engage in a fundamental discussion of the merits and limits of efforts to make markets work in developing countries. I rather address the question: What can you do to make markets work better, especially at the territorial level, i.e. locally and regionally?

Chapter 2 What are markets?

In a market economy, the market is the most important place for producers and customers to coordinate their actions. Most people immediately think of a physical marketplace, but it can also be virtual (a stock exchange) or abstract, such as a futures exchange. Recently, authors such as Harford (2006) and Levitt and Dubner (2005) have contributed towards raising the awareness of economics and particularly the role of markets in the everyday lives of people through the publication of popular books.

The market is the most efficient way of making resource allocation decisions. In markets, resource allocation decisions are taken in a decentralised way by producers and customers. The price is the main means of communication. Rising prices signal producers to produce more, falling prices tell them to scale back production. The same price signals tell customers about quality or perhaps even value.

However, there is frequent and widespread frustration with markets among development practitioners. While part of this frustration is ideological, some of it is also caused by practical experience. Markets often do not work properly. Some markets have too many suppliers, so prices are low and suppliers under invest in their businesses. Other markets have too few customers willing to pay for a product or a service, and hence the market remains small and underdeveloped (in terms of range of offerings). Some markets, when left to their own devices, tend to generate monopolies. Countries with sound economic institutions such as anti-trust and proper competition laws tend not to have so much of a problem with this than countries with poor economic institutions.

Moreover, markets are concerned with resource allocation, not with resource distribution, so that often functioning markets and increasing levels of inequality go hand-in-hand. One possible explanation for this phenomenon is that markets reward investment and risk taking. Thus entrepreneurs who identify and respond to market opportunities are often rewarded handsomely for their risky investments. People with fewer resources who are not able to make such risky investments then miss out on opportunities to increase their economic performance. As the saying goes "it takes money to make money"[1]. Note that other forms of economic allocation do not offer a solution to this problem.

When markets perform well, less efficient producers are often forced out of the market, while more efficient producers tend to increase their economic performance. In economic theory this means that the productivity of the country is increasing (as resources and labour move from failing to performing enterprises), and hence, the theory goes, wealth is created. While this may work in some industrialised economies, the challenge for developing countries is that the more efficient producers are often from other countries, which means that the demise of local inefficient enterprises often leads to jobs losses where people and resources are not simply re-allocated to more productive producers. Many developing countries also have very small markets, and producers

[1] The most successful entrepreneurs often do not use their own money or collateral to pursue opportunities. They have access to venture funds or loans from their networks. People without this kind of backing can only risk the little bit that they can afford to lose.

often do not have much time to respond to new demands from customers[2].

However, efforts to substitute markets with other modes of coordination have failed. After the collapse of communism a senior former Soviet official seeking advice on the workings of capitalism asked, "Who is in charge of the supply of bread to London?" (Harford, 2006). For a person who is living in a market economy, this question appears quite odd. However, it nicely illustrates the difference between a market economy and other approaches to solving the coordination problem in an economy, especially such as communism. Trying to imagine that one agency would be in charge of coordinating the bread supply in London takes one quickly to the realisation that the communist approach of central planning is unlikely to work in any satisfactory way. Everyday items like bread and coffee arrive in our shopping baskets through a complex series of transactions between dozens of different producers and service providers. For instance, drawing a diagram of how the bread arrives at your local shop as a chain of transactions will oversimplify the choices that actors along the chain must make. For instance, each actor along the chain must make choices about purchasing stock and selling, production scheduling and investment into their business. The important point is to realise that each actor in this "chain", or rather market, is transacting with others through decentralised decision making.

[2] Think of the low risks a retailer faces when importing a few sample products from another country to create a new local demand, versus the risks for a manufacturer to develop a new product to create a new market. Retailers face much lower risks, and can also respond to new trends (which they help to create) much faster than a manufacturer.

Why is it that markets sometimes do not work? First, there is market failure. There are inherent (another translation from the German is system-immanent) as well as idiosyncratic reasons why markets do not work. Second, there is government interference. Government interventions often create distortions that inhibit markets from working properly. To better understand this we first have to examine the character of markets.

An example of a typical market place in Vietnam

Chapter 3 Requirements for a market to function

This section provides an overview of the platforms and institutions that are needed for a market to function optimally. It is important to note that not all markets require all these elements, but these elements are essential when efficient performances with optimal social benefits are required.

Mohr and Fourie (2007:29) explain that for a market to exist, the following conditions have to be met:

- There must be at least one potential buyer and one potential seller of the good or service.
- The seller must have something to sell.
- The buyer must have the means with which to purchase it.
- An exchange ratio – the market price - must be determined.
- The agreement must be guaranteed by law or by tradition.

This description offered by Mohr and Fourie (2007:29) appears to be focused mostly on the ability of different parties to transact with each other. Earlier it was explained that in its simplest form a market exists for supply and demand, with a bazaar or a flea market put forward as a good example of a market. McMillan (2002:5) states that careful analysis of even a simple market such as a bazaar will reveal that there is more at play than just supply and demand. There are rules and customs, and there are negotiations, search costs, price comparisons, transaction costs and competition between suppliers.

There are also non-market actors not directly involved with a specific market, such as the police outside, the property owner and the providers of credit and packaging. Thus markets should not be thought of outside of their social context, as the social context assists societies to deal with the side-effects of market systems (White, 2002; Lindblom, 2001:277; Granovetter, 1985:482). Markets are embedded in social systems that are not always apparent or visible, and the embeddedness is often ignored or assumed by economists and econometric models (e.g. the Arrow-Debreu model and other econometric models).

In fact, many development practitioners ignore the social system and institutions when they focus purely on supply and demand of products and services.

Transactions take place within a social context, as we prefer to deal with people we know or want to be associated with, or known and trusted brands. McMillan (2002) identifies the ability to trust other players to keep their promises as one of the key factors that determines whether markets work or not. This could describe the social context of relationships, but could also refer to the institutions that exist to enforce promises (or contracts).

McMillan (2002) explains that for a market to work, five specific elements are required as a platform:

- Information that flows smoothly.
- Property rights that are protected.
- People must be able to be trusted to fulfil their promises.
- Side-effects on third parties must be curtailed.

- Competition in the market is fostered.

Rodrik (2000:5-10) identifies five non-market institutions that are needed for markets to perform:

- Property rights
- Regulatory institutions
- Institutions for macroeconomic stability
- Institutions for social insurance
- Institutions for conflict management.

In Table 3.1 the elements identified by McMillan and Rodrik in the preceding two bulleted lists are compared.

Table 3.1: Comparison of McMillan's five elements with Rodrik's non-market institutions

McMillan's five elements of a market platform	Rodrik's five non-market institutions
Property rights that are protected	Property rights
Side effects on third parties are curtailed	Regulatory institutions
People can be trusted to fulfil their promises (or be held accountable)	
-	Institutions for conflict management
Information that flows smoothly	-
Competition in the market is fostered	-
-	Institutions for macroeconomic stability
-	Institutions for social insurance

Source: Cunningham (2009)

From Table 3.1 it can be concluded that Rodrik and McMillan agree on property rights, although McMillan emphasises that these rights must be protected, but not overprotected. Rodrik's description of regulatory institutions and their functions combines McMillan's two elements, namely that side-effects on third parties are curtailed and that people can be trusted to fulfil their promises. The description offered by McMillan seems to rely more on social trust than on law enforcement, while Rodrik emphasises the role of laws and courts. Rodrik does not focus so much on information flows as does McMillan, and only discusses competition and its importance elsewhere.

As a result of this social embeddedness of markets, the configurations of institutional arrangements that govern the behaviour of actors in one society cannot easily be transferred to another due to their embeddedness in a social system of production that is societally distinct. Societies can borrow selected principles of foreign societies, but the effectiveness of such borrowing is often limited due to differences in the social systems, management styles and work practices.

Chapter 4 When markets fail

In cases where markets do not organise production or goods allocation efficiently, the situation is described as a market failure. The term "market failure" does not imply that a market is not working at all, but that it is not working efficiently because it is not producing goods that are wanted. The MacMillan Dictionary (1986) describes market failure as *"The inability of a system of private markets to provide certain goods either at all or at the most desirable or 'optimal' level".* Again reference is made to the allocation of resources not being at the desired or optimal level.

Samuelson and Nordhaus (1992:741) define a market failure as *"An imperfection in a price system that prevents an efficient allocation of resources"*. In this definition reference is made to the importance of the price system being able to reflect the true costs and value of a product, with natural monopoly, imperfect competition, asymmetry of information and externalities cited as examples of imperfection. In the case where a price system cannot adequately reflect the true value of the good or service, a market failure may occur because resources may be allocated inefficiently.

Lines *et al*. (2006:167) explain that market failures are often visible in the forms of the growth of monopolistic firms and other non-competitive organisations, and when factors of production stand idle. Markets also fail when externalities such as water and air pollution are not included in their costs by firms, so that they make private profit at the cost of society. A current example of this is that many mines in South Africa never made provision for clearing up their environmental damage at the end of their operations. They never included this as a cost in their operations, so at the end of the mine life they did not have funds left to clear up their sites. This is

referred to as a market failure; the customers did not require this provision to be made, the mine did not calculate this cost, and the institutional configuration did not enforce this provision. The market has failed to prevent environmental damage. It does not mean that gold or coal was not sold, but that a specific market (the market for environmental management) did not perform as expected.

When a market fails it is effectively caused by failures in the institutional arrangements that support the market (see Chapter 3). Thus addressing market failure is about getting markets to perform more efficiently or optimally in the way that resources are allocated or decisions made regarding the production of goods and services. While certain interventions will be aimed directly at the market, other interventions are needed at the institutional level. For instance, whenever one or more of the five prerequisites for markets to perform are missing, this will lead to a market failure. However, this depends on the maturity of the market, and how fast economic actors learn about the different ways to transact. As transactions increase, the structure and institutional configuration also change. This takes time. Sometimes a new market can emerge using many of the configurations and structures of another market. But in many cases we are simply being too impatient when we describe a certain market as “failed”. We forget that it sometimes takes time for market actors to figure out what the best transaction mechanisms are. Of course, in markets with very few transactions, it may never happen.

4.1 Some common types of market failure

In the economics literature several different market failures are described. Over time the importance of these market failures have changed, and new relationships between some of the failures have also been built. We define system-immanent (inherent) market failure as a condition under which markets will fail even in a vibrant economy with a strong anti-trust body.

4.1.1 Natural monopoly

There are products and services where markets cannot work, mostly due to technical reasons. A typical example is water distribution. A functioning market in water distribution would have to be based on parallel networks of pipes, which is something that would be prohibitively expensive. A similar logic applies to electricity distribution. In recent years, some natural monopolies have ceased to be natural because of technological change, for instance in telecommunications.

A natural monopoly is not the same as monopolistic behaviour of firms (see section 4.1.7).

4.1.2 External effects

Companies pursue a business opportunity because they can earn money by addressing it. If there is an opportunity where a company will not be able to reap the benefits of its investment, the company will probably not pursue it. A typical example is investment in skills development. Business owners often accept that in principle it would make sense to invest in skills upgrading for their employees, as this may lead to productivity improvements. However, some of them would subsequently move to a different employer, so the

company that paid for the training course would reap only part of the return on its investment. Another part of the return is reaped by other companies. Thus firms are tempted to underinvest in skills development because they will not reap the full advantage of their investment. However, when firms do invest in skills development, they create benefits for themselves and potentially for others. That is then an “external effect”, which would in this case be a positive external effect.

There are also negative external effects, for instance environmental damage or negative health effects of an industrial plant on its neighbours. Another type of external effect is coordination externalities which we examine below.

4.1.3 Indivisibilities or economies of scale

An indivisibility describes a situation where the market can overcome the cost barrier, but where the economies of scale are large and thus investment is limited or is not taking place at all.

In most economic subsectors, there are economies of scale, but there are also minimum efficient scales. An example of a minimum efficient scale is the minimum volume of steel that can be produced by a steel plant. The cost of investment is so high that only a few firms can overcome the barrier to entry. Due to the high economies of scale required to earn a return on investment, only a few firms enter this market. For these firms to earn their return on investment they may resort to monopolistic or other predatory behaviour. In markets where there are high indivisibilities there are typically a few large firms that dominate the sector, as smaller firms cannot access the capital nor the markets either to overcome the barrier to entry or to reach sufficiently high economies of scale to make the investment worthwhile. To some extent, production

technologies can be downscaled. But there are limits to this, and that is what “indivisibilities” are about.

In some cases economies of scale crowd in investors, so if the barriers to entry become too low so that it takes little effort to enter, underinvestment might occur. We often see this with informal traders and in small-scale manufacturing. Because the entry barriers are low, more people enter the market, leading to a low return on investment and eventually failure.

It is important to note that while indivisibilities are mostly associated with large investments, smaller indivisibilities also prevent progress. For instance, the cost for a small firm to employ a full-time accountant or to buy an additional computer or delivery vehicle could be prohibitively expensive. These are all investments that would require an increase in transactions to make the investment viable[3].

Firms that manage to overcome the barrier to entry may be faced with another challenge: the barrier to exit. This means that the sunk cost of switching to newer technology or different markets typically keeps these firms captive. This could be the same as path dependency. Large firms are often more prone to this as they have huge investments that are often tied to each other.

---

[3] Many BDS interventions in the past were meant to address these kinds of indivisibilities, but because donors disconnected the market development approach from the working of markets this hardly happened. Everyone became carried away by generic business services and the service providers and forgot that business services help firms to overcome indivisibilities.

Firms that do manage to overcome indivisibilities are often able to gain a competitive advantage. It is important to highlight the fact that indivisibilities not only keep new firms from entering a market, but also prevent existing firms from upgrading to new technology or from implementing new business models.

Typically indivisibilities are overcome by new combinations of technology or by innovative new business models. For instance, industrial engineering is all about overcoming these kinds of obstacles through a combination of incremental improvement and breakthrough designs. Many industrial firms would overcome a technical obstacle through a very expensive work-around, and then over time as the market develops search for more effective methods. In other cases a new kind of business (business model innovation) might emerge that provides access to an indivisible input (such as goods amalgamation). Many smaller firms are simply not able to do this and then suffer from an indivisibility.

4.1.4 Asymmetric information

The classical example of asymmetric information is the sale of a used car. The seller knows exactly what is wrong with the car. The buyer can identify some flaws, but will definitely miss others. This may lead to a situation where the buyer refrains from entering into a transaction altogether, i.e. a market does not evolve. The seller could also refrain from finally selling the car if he or she is not certain why the buyer is arguing for a certain price. This failure works in both directions.

Thus asymmetric information occurs where one party in a market transaction has more information than the other. This may result in the misallocation of resources due to inefficient decision making on

the part of organisations or individuals, or the collapse of whole markets.

This does not imply that all the sellers' or buyers' information must be known for transactions to take place. Markets with imperfect information exist because products are differentiated, and in imperfect markets price is not balanced between supply and demand because price becomes a medium of communication from sellers to buyers. Thus it can be concluded that certain kinds of information in a complex modern economy will remain incomplete and imperfect – a market failure occurs only when there are major differences of information between buyers and sellers.

Adverse selection is related to asymmetrical information and is defined as *making a sub-optimal decision as a consequence of incomplete or imperfect information regarding either risks or quality*.

4.1.5 Public goods

Consumption of a public good does not diminish anyone's access to the good. For the purpose of this publication a public good is defined as something that is non-rivalrous and non-excludable. This means that consumption of the good by one individual does not reduce the amount of the good available for consumption by others, and no-one can be effectively excluded from using that good.

A public good market failure occurs when public goods are provided in a way that benefits very little of society, or where the public sector fails to respond to a demand that is in the interests of society as a whole. There are many services that are deemed to be public goods, of which defence, law enforcement and basic education are

most often cited as examples. In many countries healthcare, and even secondary or tertiary education, are seen as public goods.

There are goods and particularly services where it would be difficult or impossible to charge beneficiaries for their use, where free riding is very easy, or where the consumption of the service by one consumer does not deplete the service. Textbook examples are street lights or lighthouses. Another example is the provision of agricultural extension services in poor areas, or the provision of specialised calibration services to product certification laboratories to support export industries to meet international standards. Research and development by tertiary and other publicly funded institutions can play an important role in innovation and production in a specific region, which is another form of public good.

Increasingly knowledge is seen as a public good, because its availability to one consumer is not diminished by its use by another. Arrow (1999:17) explains that production occurs when the private goods of capital and labour are combined with the public good of knowledge. By increasing the public knowledge that is available, economic growth occurs. However, when knowledge is provided as a private good, the cost of growth to a society increases.

4.1.6 Incomplete or non-existent property rights

Without full and complete property rights, markets are unable to take all the costs of production into account. De Soto (2000) and Prahalad (2005) explain that the lack of access to formal property systems is a barrier to market entry for poor people, who cannot gain access to the formal capital markets without property rights. De Soto (2000) and Prahalad (2005) emphasise how dependant the modern world is on the existence of formal property rights and explain the links between property rights, poverty, innovation,

wealth and progress. For instance, property often allows a person to gain access to financial resources without requiring that person to sell the property. Thus owning a house allows a person to get a credit card or overdraft facility more easily, using the house as collateral. There are many more assets than houses, but in many countries small farmers or start-up entrepreneurs cannot gain access to funds because their assets are not recognised as collateral. Not having any collateral means that entrepreneurs cannot take risks (remember, there is a relationship between taking risk and earning a return) to try and make a profit.

Another view of property rights is who owns the profits and who decides how to apply or distribute the profits. This means that property rights also involve different legal forms of company or asset ownership, and the decision-making power of these owners to decide how to distribute the proceeds from business. However, property rights not only affect business owners but also societies. Nelson (Nelson, 2003:1691) draws attention to the increasing tendency for scientific knowledge that used to be in the public domain (commons) to be privatised. This is especially worrisome in instances where public funds have paid for research and development which is then transferred or managed as a private good.

Property rights not only refer to the rights on physical objects, but also include patents, copyrights and other protective mechanisms. The ability to use property to raise finance, or the exchange, trade or transfer of property, is as important as ownership of property.

While property rights, patents and copyrights are essential to the functioning of markets, there are cases where their existence could be counterproductive. **The intention of patents and copyrights is**

to stimulate the commercial development of new inventions. While patents and copyrights seem to stimulate development and further innovation in some industries, it does not always work in all industries. For instance, there are many scholars who argue that patents in the pharmaceutical sector are too prohibitive. There are also cases where firms in some countries are taking out copyrights on things such as genes, plants or traditional recipes. These copyrights then prevent other firms from experimenting or using these protected inputs, undermining investment. Mazzoleni and Nelson (1998:1051) conclude that not enough is known about the conditions under which patent laws stimulate or undermine commercial development.

4.1.7 Sub-optimal market structures: monopolies and oligopolies

When markets are structured in a sub-optimal way then imperfect competition, price discrimination and other uncompetitive behaviour such as monopolistic competition, oligopolies and monopolies can occur. This leads to a market failure. Stigler (2002) describes a monopoly as a situation where a single company is the only seller of a good or service, and an oligopoly as a situation where there are only a few sellers. **Successful monopolists earn extra-large profits by raising prices above what they would be with competition, so that customers pay more and the monopolists (and perhaps their employees) gain. This is often referred to as rent seeking.**

Probably the most important example of idiosyncratic market failure is a monopoly that has evolved through the natural evolution of a given market. In industrialised countries, this is usually linked to the life cycle of a given industry. As an industry

moves into maturity and later decline, the company structure consolidates through mergers, acquisitions and exits.

Less frequent are cases such as some segments of the software industry, where quasi-monopolies have emerged due to lock-in and network externalities. Lock-in occurs when the incentives against switching from technology A to technology B are very strong due to the high switching cost of the acquisition of hardware and software, but most notably due to the need to train employees in the use of a different technology. Network externalities occur when there are increasing returns to the adoption of a technology. For instance, the very first buyer of a telephone is acting quite irrationally, since there is nobody he or she can call, whereas from that moment on every subsequent buyer enjoys a benefit.

In developing countries, monopolies are sometimes the consequence of government intervention and privileges granted by government. Many sectors are still dominated by state monopolies where the state is a monopoly actor in telecommunications, for instance. In other cases, state monopolies are the result of shallow markets that do not sustain more than one supplier; middlemen in poor rural areas are a typical example of this phenomenon. Ultimately, though, the emergence of a monopoly follows the life cycle and the related learning curve, the main difference being that the first two phases of the life cycle (emergence and growth) are quite short and the consolidation stage is reached very quickly.

In cases where there is a monopoly or oligopoly structure, it is difficult if not impossible for new competitors to enter the market, thus the barriers to entry are raised (Mohr & Fourie, 2007:244). These barriers exist either through the design of the market, or

through limitations in the size of the market, licensing, patents or right, or even access to raw materials.

Sometimes firms become dominant due to normal market processes, and that monopolistic power is not always due to uncompetitive behaviour of firms. An example would be where a market is too small to support many rivals, which means that the market can only support one or two actors. In cases where dominant firms (such as Walmart) are constantly increasing their value and reducing their profits, their behaviour cannot be described as a monopoly leading to market failure (because prices are going down or value is increasing). In these instances one would have to look at their relationships with their suppliers and their customers, or consult the anti-competitive laws in the countries that they operate in. For instance, the question then becomes whether they are bullying their suppliers all the time, or whether they are actively developing their suppliers. In the latter case they can hardly be described as a monopoly, but simply as a very dominant actor.

Yet another type of monopoly is based on technological innovation. The relation between sub-optimal market structure and natural monopoly (see section 4.1.1) is that over time many natural monopolies are overcome by new technology and modern management. Thus telecommunications was at some point in the past deemed a public good provided by governments (hence state-owned monopolies), but now new technology (such as cellphones and satellite and wireless technologies) makes it possible for private firms to provide the same service. Thus governments that still provide basic communication services are now deemed to be monopolistic. In recent years the same has happened to many other traditional natural monopolies, such as road infrastructure

and even electricity generation and distribution. Governments in developing countries are hesitant to dissolve these state-sanctioned monopolies from which they earn huge revenues because the cost of provision has gone down so much (meaning the state owned enterprise is seeking rent).

4.2 Summarising the consequences of market failure

This section briefly summarises the most frequently cited consequences of market failure discussed in the preceding chapter.

Table 4.1 gives examples of market failure and their consequences, looking at the case of rural development.

Table 4.1: Common market failures and their consequences applied to rural farmers

Type	Example	Consequence
Natural monopoly	Telecommunications in rural, thinly populated areas	Customers in rural areas pay a much higher price for telecom services than urban customers, perhaps have no service at all, and suffer from delays in access to innovative telecom services.
External effects	Investment in skills development	Companies invest less in the skills development of their staff that would be desirable from a macro perspective.
Indivisibility	Size of a container (minimum 39 cubic metres) that needs to be filled by supplier	Small producers cannot connect to customers because they do not produce enough to fill a container, and smaller containers are not (yet) available.

Asymmetric information	Information about residual toxics and other contaminants in fruit and vegetables in the absence of sophisticated and costly testing equipment Information about the quality of planting material (seeds)	Customers do not buy fruit or vegetables if they suspect that producers have used more agrochemicals than they admit Producers only buy seed varieties they know, and they buy from sellers that they know.
Public goods	Availability of agricultural extension service for poor producers	Producers cannot improve quality and productivity and thus remain uncompetitive.
Sub-optimal market structures and (monopolies oligopolies)	A middleman in a rural region acts on behalf of a large retailer. The middleman is not very transparent about the value of the crops	While larger farms are able to negotiate with the middleman, or use their outputs in their own production, smaller farmers are at the mercy of the middlemen. They are never sure whether they will be able to sell their crop, and at what price.
Incomplete or non-existent property rights	Small farmers on communal land do not have the rights to use their land as collateral.	Due to a lack of property rights small farmers are not able to use their land as collateral to raise capital. A further consequence is that because nobody "owns" the land, overgrazing or poor maintenance occur. Although it affects all the actors, nobody takes responsibility for addressing the problem.

Market failure has five main consequences:

1. Market failure leads to uncompetitive situations. This could either mean that new entrants are kept out of the markets due to monopolistic behaviour or high indivisibilities, or that consumers pay high prices for products that could be available at lower cost. In uncompetitive situations, dominant players can exert power over the marketplace, price and other social partners, making it difficult for new competitors to enter the market. Monopolies and oligopolies are also renowned for their poor service delivery and other shortcomings, and these can in many cases be legal monopolies protected by governments.

2. Market failure generates low-level equilibrium. The examples given in Table 4.1 explain how market failure issues can reinforce each other and thus keep rural producers disconnected from markets. Income stays low, investment capacity is low, there is little if any innovation and upgrading, and producers remain mired in poverty. Due to the interconnectedness of markets a failure in one market could have an impact or a knock-on effect on several other markets. Thus a failure in the steel market could impact the automotive, construction and several manufacturing sectors. When markets fail, it is usually the smaller firms and consumers that suffer the most, simply due to their lower human and financial resources available for finding ways around the “barriers” or “obstacles”.

3. Market failure generates sub-optimal delivery of critical investment, for instance into skills development or research and development, thus reinforcing the competitiveness gap that keeps producers and companies from upgrading so

that they might be able to connect with dynamic markets. In cases where producers cannot earn returns on their investment, underinvestment may occur. The uncertainty of return could be caused by indivisibilities such as high entry, adoption or exit costs, monopolies or property rights. This means that suboptimal delivery of critical investment takes place in cases where the risk on return is too high, which leads to underinvestment by entrepreneurs as they are uncertain whether they can make a profit or not.

4. Market failure creates barriers to entry, thus reinforcing monopolies and the high prices and service delivery shortcomings that come with monopolies.

5. Market failure has negative welfare implications not only in the abstract world of economics research, but also in the very concrete world of real societies, in particular in developing countries. Market failure blocks development options and thus creates barriers to growth. Less growth invariably means more poverty. Market failures furthermore place more demands on government, as government often feels obliged to step in when markets fail to deliver optimal social results. Many developing countries are trapped in situations where the markets exist, but they perform poorly. Due to these dire consequences, governments everywhere are actively addressing system-immanent market failure, and many governments have set up anti-trust bodies to combat private monopolies.

It would be a mistake to assume that market failure is a phenomenon of developing countries and rural areas, although market failures in developing or underdeveloped countries are

often more frequent and pervasive (Rodrik, 2008; Stiglitz, 1998). One of the main causes of market failure in established or newer industries relates to a lack of competition in these markets, or to a lack of a proper institutional landscape. In some cases demand exists, but there is low supply. This results in prices being driven higher, making products too expensive for many people. It may also lead to sales volumes being so low that a product is not supplied at all in a specific region. In other cases, supply could be available, but demand is very low. This could result in the price dropping to a point where it is no longer viable for producers to manufacture a good or provide a service. In extreme cases, both supply and demand are low, leading to a low-equilibrium state. Examples are the software or pharmaceutical sectors in many developed countries which are not performing optimally.

Rodrik (2007:4-5) argues against the conventional wisdom that the problem is in supply, and contends that the problem lies in too low a demand which does not appear to be profitable to explore. This is often because the requirements and specifications or preferences of the demand-side are poorly articulated or difficult to observe by most firms.

To practice identifying market failures take a look at Case Study 1 at the end of this book. This case study can also be used by trainers that want to show learners how to practically identify and respond to market failures.

Chapter 5 Markets and other modes of coordination

Earlier it was stated that markets remain the most efficient way of allocating resources in a decentralised way. But the previous chapter made it clear that markets are also prone to certain failures. What is needed to assure that they work properly? It has long been clear that the effectiveness of markets is linked to two factors, namely their interaction with hierarchy and networks and their embeddedness in societal structures, values, moral standards and similar factors.

Let us first look at the categories “hierarchy” and “network”. While economics research has formulated the market/hierarchy/network triad of modes of coordination (Powell, 1990), social scientists tend to distinguish market, organisation and community. Table 5.1 looks more closely at the economic perspective.

Table 5.1: Stylised comparison of forms of economic organisation

Parameters	Forms		
	Markets	***Hierarchies***	***Networks***
Normative basis	Contract, property rights	Employment relationship	Complement-ary strengths
Means of communication	Prices	Routines	Relations
Methods of conflict resolution	Haggling; resort to courts for enforcement	Administrative fiat, supervision	Norm of reciprocity, reputational concerns
Degree of flexibility	High	Low	Medium to high
Amount of commitment among the parties	Low	Medium to high	Medium to high
Tone of climate	Precision and/or suspicion	Formal, bureaucratic	Open-ended, mutual benefits
Relationships between economic agents	Independence	Hierarchical	Interdepend-ence

Each of the three modes of coordination has its specific advantages and disadvantages[4]:

1. A functioning market (i.e. a market that does not suffer from market failure) is the best choice for coordinating allocation decisions on scarce goods. It does not address the issues of distribution (i.e. equitable distribution of assets and income) and scale (i.e. the overexploitation of non-renewable

[4] For a more detailed discussion see **THOMPSON, G.** 2003. Between hierarchies and markets: the logic and limits of network forms of organization. Oxford: Oxford University Press.

resources). In fact, functioning markets tend to decrease equitable distribution and encourage the overexploitation of non-renewable resources.

2. In 1937 Coase introduced the term “hierarchy” to describe the way firms are organised to coordinate production. Coase (1937:5) argued that firms exist because there is a minimum cost of producing a good that cannot be overcome by an individual, therefore firms are formed with hierarchical structures to coordinate production. Coase predicts that if the market inefficiency (or friction) is too high, firms will produce required goods or inputs internally (leading to vertical or horizontal integration). A hierarchy is good at conducting routine activities that require division of labour and direct coordination. Scale-intensive production is practically only possible in private sector hierarchies, i.e. companies. Delivery of routine services, especially with respect to public goods, is the main task of public sector hierarchy, i.e. the public service. Moreover, the public sector needs to address issues of market failure. Hierarchies tend to be clumsy when it comes to flexibly responding to non-routine problems, challenges or opportunities. There is also a relationship between the life cycle of the industry and the integration of firms. In mature industries, firms start to exit activities that are non-core to the business. They thus shift from hierarchy transactions (for instance for catering services to their workers) towards market-based transactions (contracting external catering services). In many developing countries huge industrial giants have arisen to overcome the many different market failures, but now these firms are unable to get strategic direction, leading not to market failure, but to hierarchy failure (the collapse of whole industrial firms).

3. Networks were conceptually introduced as a third mode of organisation by Powell (1990). A network refers to formal constellations, from strategic alliances to business associations, as well as informal constellations, for instance the dense communication networks inside industrial clusters. Networks are good at coordinating issues where markets fail and hierarchies are not flexible enough. However, just as markets and hierarchies may fail, so can networks, for instance when they grow too big for effective internal coordination.

What is important in both the economic and the social science strand of theorising is the observation that in the real world it is highly unlikely that any pure mode of coordination will work. Just as markets, hierarchies and networks can also fail. When one mode of allocation (hierarchy, market or network) fails, combining elements from the other modes or completely switching to another mode could offer a solution. So when a market does not work, the adequate answer is, in all likelihood, **not more market** but rather **more hierarchy/organisation**, for instance in the shape of an anti-trust body that dismantles monopolies that have naturally and spontaneously emerged from market processes. The response to market failure can also be more network/community, for instance through collective action to address a specific problem that is not solved spontaneously in the market.

For instance, market imperfections sometimes cause firms to use internal transactions to circumvent the market system through internal exchange, internal capital flows and internal information exchange. Thus an international firm with an operation in a developing country will bypass local travel agents, logistics firms and quality management service providers and use internal

divisions providing these services, thus bypassing the dysfunctional local markets.

It is important to note that in many mature industries there could be different kinds of transactions taking place in parallel. For instance, in many economies the state (hierarchy), business associations (network) and private businesses (market) provide Quality Assurance services. Thus all three forms of allocation could be present. All three mechanisms could provide exactly the same service, using exactly the same experts. However, it is likely that the market-based actors would be faster to respond to new technological advances or shifts in consumer behaviour. The point is that we must be careful of "market fundamentalism" where it is argued that the product or service provided by the market is always better. This is simply not true. The tendency by development practitioners also to prefer that only one kind of mechanism is in place is also misguided.

However, markets remain the most efficient way to coordinate transactions simply because of their decentralised nature, and the self-interest of the actors involved (Mankiw, 2003:88; Lindblom, 2001:265-266; Lindblom, 1995:685). They are inherently faster in their response, because different people respond to options in different ways. In many cases markets remain the most efficient form of allocation, especially when alternatives such as central planning or other economic systems are considered. This is described in a vivid example by Lindblom (1995:685), who asks how many people are systematically coordinated through the market system to make one cup of coffee, or to bring steel to market.

Case Study 2 at the end of this book allows an opportunity for learners to apply these insights to a practical case.

Chapter 6 The relationship between market failure, government failure and network failure

Whereas the term “market failure” has been broadly discussed over the last century, the term “government failure” is still a fairly recent topic of discussion. In 1944 von Hayek (1944, reprinted 2001) argued that market failure does not imply that government should attempt to solve market failures, because the costs of government failure might be worse than those of the market failure it attempts to fix. A more precise way to describe a government failure is that a **government failure occurs when a government intervention causes a more inefficient allocation of goods and resources than would occur without that intervention.**

It is important to analyse the interaction between the three types of failure. For instance, market failure often leads to ineffective government intervention – and as a consequence government failure. This is mainly because of the difficulty of government officials to identify or correctly diagnose the failures in the market performance, or simply because public sector programmes often completely ignore markets and work against them. Sometimes the diagnosis is right and the intervention is ineffective. This is not an ideological statement against public sector intervention, but simply a statement about the reality that public sector officials in developing countries are faced with the very same constraints as the private sector. Market failure can also lead to ineffective collective efforts (network) – and as a consequence to network failure. This is often also caused by approaches that are overly dependent on coordination of different actors with very different priorities in an environment where there are many simultaneous complex processes going on (this often happens in sub-sector development approaches such as tourism development). Some

people refer to this kind of failure as coordination failure. Just as with market failure, you do not solve coordination failure by more coordination!

Strong markets require strong governments (McMillan, 2002; Fligstein, 2001:3; Messner & Meyer-Stamer, 1992). In many developing countries, the failures of government far exceed the failures of the markets. The role of government in the development of markets is even more important in lesser developed countries, as the state must play a role in acquiring new skills and ensuring a stable market platform (Fligstein, 2001; Hosseini, 2001; Stiglitz, 1998). Although markets can function in countries without governments, it must be questioned whether these unchecked markets create socially optimal solutions, especially in the long run. Many governments in developing countries face the same challenges as their firms, in that it is difficult to find the right information, skills or resources. Furthermore, government officials are also economic agents who are influenced by corruption.

It would be too simplistic to reduce the debate to governments versus markets. Markets can be useful instruments for governments to achieve their objectives. A well-designed market could be a useful government instrument because it puts resources into the hands of people who can use it best. McMillan (2002:195) argues that this means that while governments often fail to pick "winners", they can create a market place where the best firms compete to implement certain solutions that benefit society. Rodrik (2007:3) argues that in recent years, industrial policy has shifted from a focus on getting policy output right towards ensuring that the policy process is working. Thus Rodrik promotes a discovery process that allows for adjustment and interaction between the public and the private sectors.

Chapter 7 Addressing market failure

Solutions to market failure can be provided through markets, hierarchy, or networks. Practitioners often go intuitively for hierarchy, for instance suggesting that government should deliver a given service, thus often creating structures that permanently distort markets (which lead to a government failure). Or practitioners sometimes wrongly assume that markets are always better, thus trying to get supply and demand to work in instances where the social institutions will not support the transactions. This will lead to market failure.

Many examples of market failure are instinctively understood and addressed by practitioners, although they would not necessarily label them accordingly. For instance, the fancy term “indivisibility” captures the fact that a container is usually 20 or 40 foot long and has a volume of 39 or 78 cubic metres. A supplier who cannot fill a container (for instance, a small group of handicraft producers) will find it difficult to enter the market. Similarly, agricultural producers who want to supply European customers need to test their products for agritoxic residues. The necessary equipment costs hundreds of thousands of dollars. If producers cannot afford this, they are out of the market. The obvious response is an effort to assemble a group of producers who can jointly produce a sufficient amount to fill a container. In many cases development practitioners are not even involved, and market actors figure the solutions out themselves through a series of experiments (trial and error). These solutions developed by market actors will almost always be better than the solutions developed by external actors, simply because the actors directly involved understand the criteria and social constraints better.

Our frustration is that this does not always happen spontaneously, or that it does not happen fast enough for our liking.

For development practitioners looking for recipes, it is necessary to give early warning that successful market development requires many different interventions aimed at different levels in the system. For instance, local market failures can only partly be addressed at the local level, and may require national intervention as well.

7.1 Addressing market failure at the local or regional level

At a local or regional level development practitioners are mostly confronted by the challenge of low scale of both demand and supply. Many markets are simply not performing due to too few transactions, thus return on investment even for entrepreneurs with the necessary capital is too low. In many cases markets for important services and goods will simply never develop in rural areas where initial demand is very low. This can also happen in urban areas. However, suppliers in other places where there is sufficient demand might be able to build enough scale and then expand their efficient operations to areas where there is lower transaction density and still make a profit. This is evident in southern Africa where many smaller retailers are struggling to survive in rural areas, but well-capitalised retailers from other areas are often able simply to extend their efficient supplier networks into these rural areas and still earn an above average income.

Another phenomenon of market development from a local perspective is that the buyers of sophisticated services who are typically willing to pay more for a good or a service are often early adopters, and are thus able to buy their inputs from, say, an urban

market before they are available locally. The net result is that the local market is starved of early adopters, and thus some momentum is lost. However, this is often eventually overcome through imitation of success by locals, or expansion of successful actors.

Perhaps the biggest challenge for development practitioners working at a local level is time. Development programmes typically have very short time horizons (1 year to 5 years), and often markets simply need more time to evolve. Markets spill over from one place to another, often in a two-step dance where first supply goes after a few early demanders, and then demand drags supply into new locations. Typically markets do not grow from the bottom up because of accurate market assessments, feasibility studies, etc. – suppliers go where they see or perceive a demand. Demanding customers go to where they perceive capable supply is available at a reasonable price. Somehow both suppliers and customers calculate the effort to transact into the price, so the price paid and the perceived value is often not related at all. The problem is much worse when customers are not even aware that a certain product or service exists, or that a certain product or service has value to them. In these instances markets really struggle to get going.

Thus market development at a local level is a challenging task. One of the most important starting points is to understand how information about certain problems, solutions or markets flow in the location, and especially whether knowledge and information within and between the localities flow easily. This would require a diagnostic that could be quantitative (this is very hard to achieve) or more qualitative. Very often when local stakeholders are given an opportunity to reflect on what they need, they instinctively come up with ideas for new services or products that are not available

locally. Thus creating opportunities where businesses can reflect on their needs, barriers or opportunities could provide valuable insights into how markets can be stimulated. You don't even always need to do intensive market research!

However, the first step would be to gain a better understanding of the specific performance requirements of a given market system. Leading questions would be:

- Who are the suppliers and who are the different customers? Why would they engage in transacting this service or product, and what is it worth to them?
- What is the value of the product, service? Is it seen as a solution to a need or problem?
- Which formal institutions have an effect on this market system?
- What characteristics of underperformance (market failure) are currently being experienced?
- Which configuration of institutions (both formal and informal) would be best suited to address this specific issue?
- What is the interdependence between this market system and other market systems?
- Are there local users of this product or service? How did they become aware of this product or service? Are they interested in supporting a local supplier, and what are their conditions?
- Where are the closest competent suppliers of this good or service? Are they aware of the market demand? Are they able to provide services or products to the targeted area? What are their conditions?

- Lastly, is there evidence of poor articulation of demand (market size, specific needs) or supply (value, cost saving, benefits)?

Within a local or regional economy we could also check to see if this market is working in other places that are very similar. Sometimes this provides us with ideas of what is possible. However, it must be borne in mind that markets evolve in a close-knit relation to other markets. Understanding those dependencies is as important as understanding the performance of the markets.

Very often the characteristics of the specific kind of market failure will provide a clue as to which interventions would be best. For instance, when there appears to be an information shortage/asymmetry (or too much information) in a specific context, then the logical response would be to ask who would be able to provide better or more relevant information. Would this be a business (like a key supplier) or a public body (such as an NGO or a university department)? Or is there an alternative to both of these? One could expand on this by pondering on how the provision of the relevant information can be provided in a more systematic way, or whether this information is available (but not visible), and which ways would make the information more easily accessible.

Development organisations have only recently embarked on formal market development programmes, yet in most cases market failures become apparent in the day-to-day fieldwork of development practitioners. For instance, when diagnosing a value chain, each transaction system that exists between different actors is prone to market or other failures. It may be necessary in some cases to do an in-depth analysis to find the causes of and solutions

to this imperfection, and in other cases the solutions may be fairly straightforward. We have found that in value chains there are often simply poor articulation of demand and very poor articulation of value or benefits of services and goods.

Different markets fail for different reasons, which requires different solutions or configurations that must always be context specific. We have found that even within one market system there could be multiple market failures affecting the same market in different ways.

7.2 Important considerations when addressing market failures

To the reader it will be clear at this point that simply trying to create supply or convince the demand to transact is a very clumsy way of fixing a market. At this point some might even feel that nothing can be done. The next section will try to assist the practitioner to think through market interventions. Ultimately we have to remember that entrepreneurs are overcoming market failures on a daily basis. Every day new markets are created, some by design, but most by trial and error. So when we are faced with a situation that we describe as a market failure we have to consider the following points.

7.2.1 Who should lead?

Is the leader government and NGOs, or is it the private sector? An extension of this question is to ask which actor would be able to create positive externalities that benefit a larger part of the market system. Another important consideration is whether the solution can be offered in a commercial way, with incentives for potential providers to invest in the solution.

7.2.2 The appropriate role of government in addressing market failure

Despite all the criticisms levelled against governments and their role in economies, the truth is that few markets exist without some "interference" or guidance from governments. For markets to deliver their full benefits, they need support from a set of rules, customs and institutions that governments play a role in creating, although in many cases government is following and not leading this institution-creating role. This is made more difficult by a wide range of government functions in a typical mixed economy. Stiglitz (1998:202) describes several important interventions for governments in developing countries that summarise some of the key points raised by other investigators. Stiglitz provides some direction to this discussion by recommending that governments should:

- identify some of the main causes of pervasive market failure;
- address pervasive markets through good policies such as reducing government impact on the effective working of the markets;
- identify which market failures can be addressed through non-market institutions; and
- play an instrumental role in establishing such non-market institutions.

Stiglitz notes that it is important to recognise the limits and the strengths of markets, as well as the strengths and limits of government interventions aimed at correcting market failures. For development practitioners the question is how we can feed our experiences and insights into the right government channels. For

instance, many development practitioners working on value chains have deep insight into obstacles to transactions, but this is not always fed back into the broader system.

7.2.3 The problem could be in the system of institutions

When the market failures are widespread within specific and other related markets, it offers a clue that the problem may be more systemic. This would then require an intervention to strengthen the institutions that the markets depend on. These institutions could refer to both organisations and basic norms, value, rules, conventions and habits. Hollingsworth (2000:61) describes institutional arrangements as the coordination of the various economic actors such as the producers of raw materials, processing, materials flow, finance, information, knowledge, customers, finished products and governments. This means that a society develops institutional arrangements to overcome the coordination problems and the conflicting interests of the various economic actors. In fact, the freer a market is, the more it depends on its institutional arrangements to coordinate economic transactions. It is important to note that market failure is often the result of inefficiencies in the design and performance of the institutions that support a marketplace.

7.2.4 Designing completely new markets

This is often easier with completely new product or services than in existing markets. It would take a complete publication just to describe the pros and the cons of this approach (see Cunningham 2009, Chapter 9.3 if you urgently want to know more about this).

Here a neutral facilitator would first have to design the market (look at the pre-requisites for markets to function) and must then make the rules of the market very clear. Thereafter, supply and

demand would have to be stimulated. In some markets one would start with creating the supply (it would probably need some financial support), and in others one would start with creating or articulating demand (this might attract investors in the supply side).

Examples of famous markets that were created in the last few years include Ebay, and to a certain extent Amazon.

7.2.5 International pressure to reform markets

Sometimes international institutions such as the European Commission and the World Bank or trading partners will exert pressure on countries to reform certain markets. In the past these institutions did not pay enough attention to the social and institutional arrangements in countries, and therefore many scholars are very sceptical about the merits of this approach. But it cannot be denied that these international pressures are constantly playing out in the international diplomatic arena. Again, the changes forced upon member states in the European Union are a good example of different countries having no choice but to reform certain markets, or having to change their institutional arrangements. However, reforms in the macro-environment are typically not enough to address market failures, and market reform can lead to disastrous results if the local institutional context is not carefully considered.

7.2.6 Sometimes it takes some evolution

Sometimes it just takes time for markets to evolve and for supply and demand to find the right products at the right prices. But it is possible to use the knowledge of the actors in the market to accelerate the development of a specific market system. Rodrik and others (Klinger & Lederman, 2006:2; Hausmann & Rodrik, 2003; Rodrik, 2000:10) argue that institutions for high-quality growth can

be developed by implementing a bottom-up participatory approach that elicits and aggregates local information to create institutions. This is the opposite of the top-down blueprints that are often over-emphasised at the expense of local experimentation and participation, and builds on the arguments of Adam Smith that the participants are the closest to the demand and supply constraints in the market. Markets often evolve from the bottom upwards through the innovations of the market participants, provided the right enablers exist to allow the market to perform. Where the right environment does not exist, market players often invent their own localised solutions, such as informal contract enforcement. For some this would simply be too *laissez-faire* and there is sometimes a risk that gains that are not spread more evenly across a society could lead to social unrest.

7.2.7 Technology can sometimes overcome market failures

Often new technologies can play a role in overcoming market failures. In many cases, technology has changed the way markets function, and in some cases it has greatly reduced the costs of finding information or transacting (with the Internet being a good example). However, new technologies are often prone to market failures themselves due to imperfect competition, asymmetric information or external effects.

7.2.8 Sometimes just start with improving the flow of information

Improving information flows is usually a good starting point. One of the greatest deterrents to market transactions is simply the costs of finding products, suppliers, customers or information. This is known as search costs. Technology is one way of reducing search costs, and another way is to strengthen market signals such as through quality standards, association membership or certification.

There are four signals that firms often use to differentiate their higher-quality goods from those of competitors with lower-quality products:

- Development of a reputation for higher quality.
- Certification by a respected third party.
- Warranties.
- Information disclosure.

Developing countries face a new risk in that large parts of their societies could be left out of the new knowledge networks and cross-boundary network societies that are now emerging. However, care should be taken not to confuse technology with information, as social networks and other forms of communication are also important in information flows.

Chapter 8 Conclusion

In the previous chapter, and indeed throughout publication, I provide some pointers to help practitioners engage with market systems. It is important to move from a very static understanding of supply and demand towards a more process-oriented or evolutionary perspective which includes actors searching for the right offer (product or service) at the right price with the right value (or impact). It is also necessary to understand the interrelationships between a particular market and other markets as well as the myriad supporting institutions that are needed for a market to function.

For many people markets are invisible and for others markets are not to be trusted. However, markets are all around us, and they are often interdependent on yet other markets. Despite the robustness of markets, and the fact that they can sometimes emerge almost anywhere, markets still do not always perform to our expectations. When markets do not allocate goods and services in an optimal way, I refer to this as a market failure. It is often very subjective as to whether a market is failing or not! Over the course of time several different descriptions of market failures have emerged. These common market failures describe the problem and at the same time give us clues as to what can be done to improve the performance of the market.

Although market systems have certain pre-requisites or required functions such as competition or trust (see Chapter 3), the importance of the different factors varies in different markets. However, one thing that practitioners must bear in mind is that markets are embedded within social systems, and there are many non-market institutions that have a great influence on the

performance of markets. **It is not as simple as supply and demand!** This is why traditional market research instruments will not really give much useful insight into what is causing the market failure. Helping a producer to identify a new market using good business management insights should not be confused with the socioeconomic problem of making a market system work better.

At a local level markets are often confronted by low scale, both in demand, supply and in the many supporting structures that markets need to function. Furthermore, firms that have access to urban or international markets often bypass local markets. However, it is not impossible to start with market development at a local level. The typical starting point is to better articulate what is used or needed, and what the value and benefits of different offerings are. This makes market system development a natural extension of value chain and cluster promotion, or local and regional economic development. It is important also to look to other transaction mechanisms (network or hierarchy) and to consider other markets that must also present for the specific target market to work better.

Although not addressed directly in this publication, it is also important to move from a very simple approach where markets are deemed more important than the state. In the end, markets need governments as much as governments need markets. In societies with small or underperforming economies, the markets and the state are affected by the same issues of scarce resources, scarce skills and abuse of power. Both the state and the markets can suffer from the same illnesses. Therefore interventions must be developed that are context specific and realistic!

Our final message is that the greatest tool for understanding markets is an enquiring approach that assumes that markets can (and often do) emerge almost everywhere. If you are faced with a situation where a market is not working optimally, you should wonder why this is so. Why does this failure persist despite the fact that many people are pursuing self-interest in a decentralised way and are trying different approaches and options? This is the art of improving the performance of market systems

Recommended reading

To read more about market systems, their histories and a broad overview of the topic, start with *Reinventing the bazaar: a natural history of markets* by John McMillan. Other authors who have helped to popularise the topic are Levitt and Dubner with their *Freakonomics* books, or Tim Harford with *The undercover economist.* For a more serious treatment of the subject, have a look at John Kay's *Culture and prosperity: the truth about markets: why some nations are rich but most remain poor,* or Lindblom's *The market system: what it is, how it works, and what to make of it*.

If you have read all of these then you are probably ready to take a look at my dissertation. Or perhaps just wait for my future publications!

To keep up to date with what we are doing on this topic, keep an eye on my blogpage (www.cunningham.org.za) or my profile page on the mesopartner.com website.

Case study 1: Understanding and Addressing Market Failure:

Kgoutslane is a deep rural community in South Africa. The main source of income is remittances and government transfers. Nevertheless, local residents are constantly involved in efforts to develop some small-scale production activities in order to raise additional income.

Some time ago, six local residents obtained, quite accidentally, seeds for rocket salad. The seeds were distributed for free at a community development event in the nearest town, Blydenhill, which is 1.5 hours by minibus away. The six local residents experimented carefully with the seed, since it had been mentioned at the event that it was valuable, and that the resulting produce could be sold at a high price. Initial experiments were not encouraging, though. Plants had hardly grown above the surface when they started to wither. An effort to grow them under shades went better, especially when they discovered that careful watering twice a day made a big difference. Soon, about 10 kg of rocket salad leafs could be harvested. One of the growers boarded a minibus to Blydenhill to seek a customer. However, neither the hawkers at the minibus terminal nor the local SPAR supermarket were interested. However, while leaving the supermarket, the grower bumped into an individual who turned out to be the owner of a local restaurant, who purchased the rocket salad leafs on the spot.

This established a pattern, where the growers delivered between 5 and 10 kg of rocket salad to the restaurant every Wednesday. At a

price of 100 Rand per kg, this created a nice profit, even after deducting the 80 Rand of fees for the minibus. Things got more complicated, though, when the initial packet of seeds was running out. The local dealer in Blydenhill offered two types of rocket salad seeds, a “natural” and a “refined” variety. The latter, she claimed, was nicer in taste and paid a better price. It was also 5 times more expensive than the “natural” seed. Moreover, both types of seeds looked absolutely identical. Thus, the growers preferred the “natural” variety.

Another challenge arose soon. Other local residents in Kgoutslane had observed that the six growers had increased their crop size and were earning more money. They purchased seeds and also started producing. They got into business with the same restaurant owner when, during one week, the early producers did not watch their plants carefully and could only deliver 2 kg, while the restaurant had a major function coming up and needed at least 10 kg. Subsequently, the competition between the various producers heated up, and they started to underbid each other. This needed not to have happened, though. A wholesale trader in fresh produce noticed what was going on in Kgoutslane, and offered to buy from local producers. However, he indicated that the minimum amount that he required was 500 kg per week, and preferably more. Unfortunately, this amount was much more than the production capacity of the growers in Kgoutslane. It would mean they have to beg for more land from the traditional leader and that they would have to make a loan to increase their production. They had to let this opportunity pass.

Another problem was the variation in demand from the restaurant in Blydenhill, which varied from week to week. Since Kgoutslane was not connected to the fixed or cellular telephone network,

producers could not inquire in advance who much was required, so that they harvested as much as last week and took it to Blydenhill, often only to learn that only half of the weekly harvest was actually needed.

Your task: Identify the types of market failure that are at play in this case. Identify practical ways of remedying them.

Case note to trainers:

We often use this case study in capacity building sessions to allow participants to practice their skills in identifying different market failures. It is based on a real case study. The case study also shows that it is possible to identify market failures are a local level, and that it is possible to develop some interventions at a local level.

The shortcoming of this case study is that it does not illustrate the similarities and differences between the given market (Rocket Salad) and other markets that may be similar.

Case study 2: Market, Hierarchy and Network forms of allocation

For almost any problem, challenge or opportunity in territorial development, there is in principle the option to address it through market, through hierarchy, or through network.

- Market: A problem, challenge or opportunity can be addressed as a business opportunity that can be pursued by an existing company or a business start-up.
- Hierarchy: A problem, challenge or opportunity can be addressed by an organisation, typically government, but sometimes also an enterprise. Resources are allocated internally.
- Network: A problem, challenge or opportunity can be addressed through collective action, be it an ad-hoc group of players that gets together only on this occasion, be it a formalised network, association or similar entity.

Government is often perceived as a main player in development. When it comes to a specific problem, challenge or opportunity, it can address it directly, through delivery. But it can also act as a facilitator, i.e. facilitating a market-based or network-based solution.

The Challenge

You are a development practitioner in a rural region with a good potential in fruit production. Local production has been growing steadily in recent years. There are a few big commercial farms with more than 200 hectares, and there is a significant number of small farmers with just two or three hectares. Small producers are mostly organised in producer cooperatives, where the cooperative organises the purchasing and distribution of inputs as well as the sales.

Local production has so far been targeting the domestic market. However, competition in the domestic market has recently heated up. At the same time, local producers have been approached by export agents who are interacting with European supermarket chains and who are interested in purchasing fresh fruit for export. In order to qualify for European markets, local producers would have to comply with the GLOBALGAP standard. GLOBALGAP is a standard devised by European retailers that sets criteria

to assure consistent good quality for fresh fruit and vegetables. The application of GLOBALGAP involves the introduction of a quality management system by producers which is certified once and regularly surveyed by an independent certification body that is approved by GLOBALGAP. So far, nobody locally fully understands what GLOBALGAP involves and how to make sure that production and post-harvesting activities comply with GLOBALGAP.

The Options

In discussions among local stakeholders, three different approaches to comply with GLOBALGAP have emerged.

1. The big commercial farmers want to pull in a private consultancy firm that has an office about four hours away. The firm is experienced in advising farmers on GLOBALGAP. Daily rates for those consultants amount to about $500 plus cost of travel and accommodation.

2. Provincial government has suggested that the National Institute of Standards could send two of its staff members to Europe to be trained in GLOBALGAP and subsequently make them available as advisors to local producers at no cost.

3. The cooperative of the small farmers has suggested to pull in a specialist on GLOBALGAP who would train a limited number of farmers on the management principles and procedures demanded by GLOBALGAP. Subsequently, those farmers would form pairs, and each pair would run a series of meetings with the other farmers; in this way, a number of working groups would be created to share the information on GLOBALGAP and to share experience among farmers as they go into implementing the GLOBALGAP procedures.

Your Task

Please discuss the three suggested approaches. What kind of transaction mechanism is this? Elaborate the advantages and disadvantages of each of them. Please rank them in terms of likelihood of sustained success.

Case notes to trainers:

This case study serves to highlight that way may deemed as a market transaction in one country or region, may be deemed best suited as a hierarchy or network transaction in another place. There is no best way of allocation, the local context matters.

Learners should also be reminded that both governments and businesses can transact through a hierarchy kind of transaction.

Source list

ARROW, K. 1999. Knowledge as a factor of production. *In* Annual World Bank Conference on Development Economics. Stiglitz, J.E. & Pleskovic, B. (Eds.), Washington, DC: The World Bank, pp:15-20.

COASE, R.H. 1937. The nature of the firm. *Economica,* (4):386-405.

CUNNINGHAM, S. 2009. The role of market failure in the utilisation of Quality Management services by the tooling industry. Ph.D Thesis, North West University,

DE SOTO, H. 2000. The mystery of capital: why capitalism triumphs in the West and fails everywhere else. New York, NY: Basic Books.

FLIGSTEIN, N. 2001. The architecture of markets: an economic sociology of twenty-first century capitalist societies. Princeton, NJ: Princeton University Press.

GRANOVETTER, M.S. 1985. Economic action and social structure: the problem of embeddedness. *American Journal of Sociology,* 91(3):481-510.

HARFORD, T. 2006. The undercover economist. London: Little Brown Book Group.

HAUSMANN, R. & RODRIK, D. 2003. Economic development as self-discovery. *Journal of Development Economics,* 72(2):603-633.

HOLLINGSWORTH, R. 2000. Doing institutional analysis: implications for the study of innovations. Vienna: Austrian

Academy of Sciences. Research Unit for Institutional Change and European Integration - ICE.

HOSSEINI, H. 2001. Uncertainty and perceptual problems causing government failures in less advanced nations. *The Journal of Socio-Economics,* 33(2001):263-271.

KLINGER, B. & LEDERMAN, D. 2006. Diversification, innovation, and imitation inside the global technological frontier. Policy Research Working Paper Series. World Bank Policy Research Discussion Paper No. 3872, Washington, DC: The World Bank.

LEVITT, S.D. & DUBNER, S.J. 2005. Freakonomics: a rogue economist explores the hidden side of everything. 1st ed. New York, NY: William Morrow.

LINDBLOM, C.E. 1995. Market and democracy. Obliquely. *PS: Political Science and Politics,* 28(4):684-688.

LINDBLOM, C.E. 2001. The market system: what it is, how it works, and what to make of it. New Haven, CT: Yale University Press.

LINES, D., MARCOUSE, I. & MARTIN, B. 2006. The complete AZ business studies handbook. 5th ed. London: Hodder Arnold.

MANKIW, N.G. 2003. Principles of macroeconomics. 3rd ed. Cincinnati, OH: South-Western College Publishing.

MAZZOLENI, R. & NELSON, R.R. 1998. Economic theories about the benefits and costs of patents. *Journal of Economic Issues,* 32(4):1031-1052.

MCMILLAN, J. 2002. Reinventing the bazaar: a natural history of markets. 1st ed. New York, NY: Norton.

MESSNER, D. & MEYER-STAMER, J. 1992. Recipe for success: strong state and strong enterprises. *Development and Cooperation,,* (2).

MOHR, P. & FOURIE, L. 2007. Economics for South African students. 4th ed. Pretoria: Van Schaik.

NELSON, R.R. 2003. The advance of technology and the scientific commons. *Philosophical Transactions: Mathematical, Physical and Engineering Sciences,* 361(1809):1691-1708.

PEARCE, D.W. 1986. Market Failure. *In* Macmillan dictionary of modern economics. Pearce, D.W. (Ed.).

POWELL, W. 1990. Neither market nor hierarchy: network forms of organization. *In* Research in organizational behaviour. Cummings, L.L. & Staw, B.M. (Eds.), Greenwich: JAI Press, 295-336.

PRAHALAD, C.K. 2005. The fortune at the bottom of the pyramid. Upper Saddle River, NJ: Wharton School Publishing.

RODRIK, D. 2000. Institutions for high-quality growth: What they are and how to acquire them. *Studies in Comparative International Development,* 35(3):3-31.

RODRIK, D. 2007. Industrial policy for the twenty-first century. *In* One economics, many recipes: globalisation, institutions, and economic growth. Rodrik, D. (Ed.), Princeton, NJ: Princeton University Press.

RODRIK, D. 2008. Second-best institutions. Working Paper 14050, Cambridge: National Bureau of Economic Research (NBER).

SAMUELSON, P.A. & NORDHAUS, W.D. 1992. Economics. 14th ed. New York, NY: McGraw-Hill.

STIGLER, G.J. 2002. Monopoly. *In* The Concise Encyclopedia of Economics. Henderson, D.R.E. (Ed.), [Web] http://www.econlib.org/library/Enc/Monopoly.html [Date of access: 12 February 2009].

STIGLITZ, J.E. 1998. Markets, market failures and development. Perspectives on economic development. *American Economic Review,* 79(2):197-2003.

THOMPSON, G. 2003. Between hierarchies and markets: the logic and limits of network forms of organization. Oxford: Oxford University Press.

VON HAYEK, F.A. 1944, reprinted 2001. The road to serfdom. London: Routledge Classics.

WHITE, H.C. 2002. Markets from networks: socioeconomic models of production. Princeton , NJ: Princeton University Press.