



Government interventions in microinsurance: evidence from China

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Abstract

The microinsurance market suffers from severe market failures; thus, government interventions are increasingly used to stimulate its functioning. Our article evaluates, from a law and economics perspective, whether these interventions are effective in increasing access to insurance without inducing moral hazard and adverse selection. We then use this framework to evaluate typical types of government interventions in the Chinese microinsurance market (subsidisation, simplification, use of group policy and established distribution channels). Using practical cases, we further identify solutions to remedy the market frictions induced by government interventions. We find that government interventions are only effective under certain conditions: (1) stable and smartly designed subsidies are provided or innovative market practices are subsidised; (2) insurance policies are easy to understand; (3) product distributors are properly trained or licensed; (4) group policies can be renewed.

Keywords Microinsurance · Government intervention · China · Law and economics analysis

Introduction

Microinsurance refers to commercially available insurance products that are designed to insure low-income groups against a wide variety of risks (e.g. life, health, death and disability) (Churchill 2007; IAIS 2012).¹ By utilising

¹ By defining microinsurance as commercial insurance, we exclude public poverty alleviation insurance projects. This is because under these insurance projects, premiums are fully paid by the government and are thus not operated in a commercial way. In China, commonly seen public poverty alleviation insurance

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microinsurance, low-income people are less vulnerable to risks and ‘the poverty trap’ can be broken (Jacquier et al. 2006; Mechler et al. 2006). As a result, both economic growth and financial inclusion can be advanced (Outreville 2013), which in turn can provide more economic opportunities and safety globally (Swiss Re 2010).² Given its large potential, the microinsurance industry is in a stage of rapid development globally.³ By the end of 2017, almost 290 million people worldwide were protected by at least some kind of microinsurance policy.⁴ Nevertheless, insured people today only account for a small fraction of the potential market (Cheston et al. 2018).

The low penetration of microinsurance is mainly due to poor insurability conditions and severe market failures.⁵ Previous studies have shown that insurability problems in microinsurance markets largely stem from information asymmetry and unaffordable insurance premiums (Biener and Eling 2012). Moreover, there seems to be a lack of resources to control for moral hazard and adverse selection and issues induced by the lack of data, small risk pools and excessive transaction costs.⁶ Government interventions (e.g. subsidising premiums and encouraging innovative market practices such as simplification, the use of group policies and established distribution channels) can be justified as a way to remedy these market failures and promote access to insurance. Government intervention in microinsurance cannot only be defended on economic grounds—governments could also intervene for social protection purposes, e.g. reducing vulnerability and poverty, empowering the poor and income redistribution (Jacquier et al. 2006; Deblon and Loewe 2012).

Worldwide, government interventions in the microinsurance market are rather common and can take a variety of forms.⁷ It may involve bringing the various stakeholders (microinsurers and potential insured persons) together or drafting specific regulations.⁸ It may involve the provision of public services (e.g. education and adequate healthcare facilities) and financial assistance, strengthening distributional institutions and encouraging creative public–private partnerships for the microinsurance industry to function properly (Trommershäuser et al. 2006). Taken together, we find that, compared to conventional insurance markets, the government’s role in

Footnote 1 (continued)

projects include universal health, micro accident programmes for the disabled and agricultural insurance for certain crops/livestock.

² For a review of the social impact of microinsurance, see Apostolakis et al. (2015).

³ Globally, the average annual growth rate was about 7.2% between 2014 and 2017. See Index Market Research (2018), available at <http://www.impactinsurance.org/about/facts-on-microinsurance>.

⁴ The data are collected by the Network’s World Map of Microinsurance, available at <http://worldmapofmicroinsurance.org/>.

⁵ A comprehensive review of the insurability of risks in microinsurance markets is provided by Biener and Eling (2012).

⁶ See, among many others, Churchill (2007), Lavin and Reinhard (2007), Linnerooth-Bayer et al. (2009), Meze-Hausken et al. (2009), Biener (2013) and Eling et al. (2014).

⁷ A thorough review of worldwide government interventions in microinsurance markets is given by Biener et al. (2014).

⁸ Many regions worldwide have implemented regulations that focus solely on the microinsurance market. India was the first in 2005, followed by the Philippines (2006), Peru (2007), Mexico (2008), Taiwan (2009, revised in 2018), Brazil (2012), mainland China (2012, the regulation for micro agriculture insurance was revised in 2016), Pakistan (2014), South Africa (2017) and Nigeria (2018). See Biener et al. (2014).



microinsurance markets goes far beyond traditional pricing regulation and solvency guarantees.⁹

Even though existing studies have shown that government interventions in the microinsurance market are indispensable (see e.g. Zenklusen and McCord 2009 and Biener et al. 2014), such interventions are not always adequate. Government interventions might be effective or at least less disruptive in increasing market efficiency only if certain conditions (e.g. the presence of market failures, charging risk-based premiums and stimulating existing market solutions) are met.¹⁰ Otherwise there is a risk that government interventions might distort price signals, crowd out the private sector and generate unsustainable costs for the government (Mahul and Stutley 2010). Furthermore, government interventions are even less likely to have an economic basis when they are used for social protection aims, as the advantages of such interventions might be eroded by political realities (Ben-Shahar and Logue 2012; Hunt 2014).

China is known for its strong, centralised government, and government intervention occurs in almost every aspect of insurance activities (Dick and Wang 2010). Government interventions in the Chinese microinsurance market are extensive and to some extent perhaps unique; for example, microinsurance premiums are often heavily subsidised by the government (Bester et al. 2018). The government intervenes not only in promoting communication and coordination among insurers, but also in the provision of information and market access (Yanli 2009). Importantly, China is a vast country with huge regional variation in economic conditions and microinsurance regulation.¹¹ Although there are microinsurance regulations at the central level, there are also diversified regulations with respect to microinsurance at the local level. These local regulations are more specific and provide further details for the implementation of national regulations (e.g. how to intervene and what types of government interventions are allowed). As a result, microinsurance is unevenly distributed in China. Different regions have diverse levels of microinsurance penetration, which leads to various forms of government interventions at the local level.¹² Last but not least, China is an important but under-researched country in terms of microinsurance, especially in emerging markets.¹³ Therefore, the extensive

⁹ See Klein (2012) for a review of governments' roles in conventional insurance markets.

¹⁰ See e.g. Hunt (2014) for a discussion on government intervention in microfinance. See also Bruggerman et al. (2010) for a discussion on government intervention in catastrophe insurance.

¹¹ Up to April 2020, Anhui (2009, 2010, 2014), Gansu (2008), Guangxi (2008), Guizhou (2013), Hebei (2009, 2018), Henan (2008, 2015), Jiangsu (2011), Jiangxi (2010), Jilin (2013, 2016), Inner Mongolia (2010), Ningxia (2009, 2011, 2012), Qinghai (2008, 2010), Shaanxi (2009, 2012, 2013, 2015), Shanxi (2008, 2009, 2013), Sichuan (2009, 2010, 2011, 2013, 2013, 2016, 2017), Hubei (2015) and Zhejiang (2015) provinces have issued local regulations regarding the implementation of national microinsurance regulations within their own regions.

¹² Data on the development of microinsurance across regions in China are not available. However, one recent study estimates the development of micro agricultural insurance in 31 Chinese regions at the provincial level. The results show that the development of the micro agriculture insurance market is not closely linked with economic development. See Sun et al. (2019).

¹³ Insurance premiums in China accounted for 42% of global premiums in 2019. This proportion rises to more than 50% of premiums in all emerging markets and is expected to become even larger in the near future. See Swiss Re (2019).



level of government intervention in microinsurance, as well as the specific features of the Chinese market, provide us with a useful subject for investigating government intervention in microinsurance.

Our central research question is:

How is the government intervening in microinsurance in China and how effective is this in increasing access to microinsurance without causing market distortion (moral hazard and adverse selection)?

We contribute to the existing literature by: (1) utilising a law and economics analysis to consider under what conditions the government should have a role in microinsurance and addressing criteria for evaluating the effectiveness of government interventions in the microinsurance market; (2) focusing on four typical forms of government intervention in the Chinese microinsurance market (providing subsidies, simplification, encouraging the use of group policies and established distribution channels) and investigating whether these interventions are effective in promoting the accessibility of microinsurance without causing commonly seen market distortions, such as moral hazard and adverse selection. The remainder of this article is structured as follows. The next section briefly introduces how the law and economics literature views government intervention in microinsurance. The subsequent section describes the microinsurance market and corresponding regulation in China. Then, in the next section we utilise the law and economics analytical framework to evaluate the effectiveness of specific government interventions in the Chinese microinsurance market. The final section concludes and formulates some policy recommendations.

A law and economics analytical framework

The role of the government in the insurance market has attracted growing attention among legal and economics scholars over the years.¹⁴ Nevertheless, to date, discussions on microinsurance are still limited.¹⁵ Our intention here is to summarise the main findings of this strand of the literature, and to consider its application within the microinsurance context. Furthermore, we do recognise that a law and economics analytical framework may have particular limitations, as such a framework primarily accounts for the economic aims of microinsurance (e.g. the improvement

¹⁴ Currently, mainstream law and economics literature is concerned with the role of government in insurance that covers catastrophic loss, e.g. natural catastrophes and terrorism risks. See, among many others, Kaplow (1991), Priest (1996), Gron and Sykes (2002), Sugarman (2007) and Kunreuther (2015). Microinsurance could also cover losses caused by catastrophes (such as flooding), but catastrophes are not the main focus of most microinsurance schemes. For example, such coverage is provided by the Microinsurance Catastrophe Risk Organisation (MiCRO) in Guatemala and El Salvador. More information is provided on MiCRO's website, available at <https://www.microrisk.org/micro-launches-in-el-salvador/>.

¹⁵ See Ranson and Bennett (2002) for a discussion of the role of government in furthering social goals via microinsurance; Mahul and Stutley (2010) for an analysis of government support in agriculture insurance; and Trommershäuser et al. (2006) for an introduction on the government's promotional role in microinsurance.



of profitability and control of information asymmetry problems). The government may obviously often intervene for social (e.g. the improvement of affordability) rather than economic aims. However, in that case the law and economics framework remains useful as it can indicate how government intervention could take place with the least amount of distortion in the market. Therefore, to complete the analytical framework, we also take into account the social aims of microinsurance; more particularly, increasing the availability of insurance for the poor.

Justifications for government intervention

Government intervention in the insurance market can be justified by the presence of market failures (Arrow 1992). Failures in the microinsurance market can exist due to a variety of reasons, such as a lack of demand from targeted customers (also due to affordability concerns) and information asymmetry. However, as will be shown below, the severity of market failures might be different for various microinsurance products.¹⁶

Lack of demand

The microinsurance market may fail when there is a lack of demand from targeted customers. Customers' lack of demand for microinsurance could first be explained by cognitive limitations. People may not have a precise expectation of probabilities and tend to underestimate low-probability loss events (Slovic 2000). Moreover, there is evidence that *ex ante*, insurance customers prefer uncertain losses rather than certain losses incurred by paying the premiums (Slovic et al. 1977; Kirsch 2002). In other words, insurance is considered as an investment and customers have a low expectation of a return on this investment during their lifetime, leading to low demand. This is especially true for microinsurance against property loss. Since the income of poor populations 'is often absorbed by basic necessities' (e.g. food), when microinsurance is available, health and life insurance are usually given high priority (Mahul and Stutley 2010). The low demand for microinsurance could also be attributed to the existence of *ex post* government relief (e.g. public compensation funds) (Epstein 1996; Harrington 2000). Since targeted customers may count on *ex post* government relief, their incentives to purchase microinsurance might be diluted (Coate 1995).

Affordability concerns

Low demand may also be related to the fact that the poor may not be able to afford the premiums. The government could remedy this by introducing premium

¹⁶ Biener and Eling (2012) suggest that compared to health and non-life microinsurance, life microinsurance is less affected by problems of insurability, contributing to lower levels of market failure that we often observe. The main reasons for this are that life microinsurance is generally easy to provide, and the event triggering coverage is fairly transparent and easier to avoid.



subsidies. Premium subsidies have been debated in the law and economics literature for the fact that they may result in the real risk no longer being visible to the insured and would thus lead to moral hazard (Shavell 1979). However, if premium subsidies are designed in a smart way (for example, by making subsidies risk-adjusted), premiums would still reflect risk and allow for risk awareness with the insured.¹⁷ Moreover, through premium subsidies, policyholders are still incentivised to adopt risk reduction measures (Kunreuther 2008). In other words, by subsidising insurance premiums, the problem of under-insurance against losses resulting from public aid (often referred to as charity hazard) could be avoided (Raschky and Weck-Hannemann 2007).¹⁸ Lastly, even when premiums are fully subsidised, the insured may not engage in risky behaviour for the simple reason that some risks are completely exogenous and cannot be influenced by the insured themselves. This might be the case with microinsurance against bad weather (such as hail storms), where *ex ante* moral hazard is unlikely to arise in the first place.¹⁹

Information asymmetry

Asymmetric information is another type of common market failure that justifies government intervention. It appears to be especially serious for microinsurance. Unlike in mature insurance markets, where sophisticated risk controls by insurers are the norm, microinsurance markets are relatively undeveloped and insurers may often encounter difficulties in assessing risks, collecting relevant information and monitoring the behaviour of insureds.²⁰

Adverse selection and moral hazard arise due to information asymmetry. These problems are prevalent in the case of micro health insurance, as individuals with high future healthcare needs are more likely to purchase insurance and the probability of using healthcare services is higher for those insured.²¹ Moral hazard may also arise in other types of microinsurance. For example, agricultural microinsurers (e.g. insurance for crop pests and diseases) may fail to distinguish between 'losses caused by an adverse natural event and losses caused by bad farming practice' (Mahul and

¹⁷ Radermacher et al. (2016) make a theoretical prediction that by providing a targeted risk-adjusted subsidy (which is equal to the expected additional cost of a person joining the scheme), the current community rating practice in microinsurance can reduce the participation of higher-risk groups (so-called 'cream skimming') and at the same time be cost effective. Yao et al. (2019) empirically test this prediction and offer evidence of the feasibility of using risk-adjusted subsidies to achieve financial sustainability for micro health insurers in developing markets.

¹⁸ For further information on the problem of under-insurance against losses resulting from public aid, see Coate (1995).

¹⁹ However, in such a case, *ex post* moral hazard is still possible. For instance, the insured may inflate the loss and avoid salvage after the hail storm occurs.

²⁰ See, among many others, Dror and Jacquier (2002), Brau et al. (2011), Murray (2011) and Biener and Eling (2012).

²¹ Problems of moral hazard and adverse selection in microinsurance have been addressed by many studies, for a review of these studies, see Biener and Eling (2012).



Stutley 2010).²² In contrast, micro life insurance might not be prone to moral hazard, mainly because the event that triggers coverage (e.g. death) is fairly transparent and there is no obvious information advantage of the beneficiary over the insurer in most cases (except e.g. in the case of a terminally ill patient who still seeks insurance coverage) (Biener and Eling 2012).

Problems associated with information asymmetry should be efficiently controlled, otherwise they will result in higher transaction costs and increased premiums, which would further impede the sustainable development of microinsurance markets (Akerlof 1970).²³ Therefore, government intervention could be justified in the sense that governments have a comparative advantage in providing additional information to help microinsurers to reduce information asymmetry and correctly set premiums (Trommershäuser et al. 2006). Worldwide, practices have shown that governments have a role to play in offering public goods such as risk databases and risk assessment models to microinsurers (Biener et al. 2014). With reliable data and models, microinsurers can better assess their risk exposure and design cost-effective products.

Assessing the effectiveness of government interventions

Although government intervention in microinsurance may remedy market failures, it could also create particular risks. Therefore, to evaluate the effectiveness of government intervention, we focus on whether specific types of government interventions create market distortions (such as moral hazard and adverse selection) and whether instruments (e.g. risk differentiation, exclusions and deductibles) are available to mitigate these distortions.

Market distortion could ensue if government interventions were to unconditionally subsidise insurance premiums. This is because, when subsidising premiums, governments may also lower the price of insurance. That is of course the social goal of government intervention—to deal with affordability and therefore to increase demand.²⁴ However, when insurance premiums are subsidised, policyholders may receive inaccurate price signals regarding the actual magnitude of their risk exposure and thus make economically inefficient decisions, e.g. not reducing their risk exposure at a reasonable cost.²⁵ This would lead to the occurrence of moral hazard.

²² The problem of moral hazard is particularly acute for crop pests and diseases. However, hail insurance might be less exposed to moral hazard, because the risk is exogenous and the cause of loss is more easily identified.

²³ For example, in many regions, providing micro health insurance leads directly to provider-induced price increases for medical services. See Biener and Eling (2012).

²⁴ Note that improving the affordability of microinsurance does not necessarily lead to increased demand for insurance, as improvement of the latter may also be attributed to other factors, e.g. the understanding of insurance, education, influence from peers, attitudes toward risk and contract design etc. See Platteau et al. (2017) for a comprehensive review of the literature on the demand for microinsurance.

²⁵ Some studies point out that if risk-reducing behaviour is not possible, insurance premiums could be seen as ‘analogous to a lump sum tax without any significant incentive effect’. See Picard (2008, p. 19).



In addition, government subsidies may not be stable and this could potentially lead to adverse selection. Practice has shown that the government often lacks a long-term strategy for sustaining premium subsidies.²⁶ Therefore, when government subsidies are reduced or terminated, a proportion of insureds would self-selectively drop out. These are more likely to be of lower risk, as low-risk individuals are likely less willing to pay insurance premiums that are too high. The remaining insureds are thus of higher risk, leading to adverse selection.

In other words, government intervention via premium subsidies will function effectively only if subsidies are stable (see e.g. Latortue 2006 and Weiss et al. 2010), smartly designed (e.g. risk-adjusted and targeted)²⁷ and implemented in ways that provide maximum social benefits while minimising market distortion (see e.g. Armendáriz and Morduch 2005 and Hudon and Traca 2011). Most importantly, it might be more effective for the government not to subsidise insurance premiums directly, but to use these subsidies for other purposes (e.g. establishing innovative distribution channels and improving financial literacy) that could increase customers' access to insurance at lower costs without increasing the risks of moral hazard and adverse selection (Biener et al. 2014).

Market distortion may also occur following government intervention if, for example, traditional risk control mechanisms of insurance (e.g. extensive exclusions, high deductibles,²⁸ high levels of agent licensing requirements and risk differentiation) are banned by the government²⁹ or are voluntarily given up by the insurer.³⁰

Typical examples can illustrate this problem. First, the government could intervene in the microinsurance market by demanding simple, standardised and understandable conditions from insurers. The simplification of contractual terms can make microinsurance more appealing to clients who are new to the insurance market and also save administrative costs (Churchill 2007). In this way, simplification could remedy potential information problems on the side of target clients. Clients'

²⁶ For example, Yeshasvini Trust (a partially subsidised microinsurance project) and Karuna Trust (a fully subsidised microinsurance project) in India have proven that the government often offers unstable premium subsidies, leading to several problems in practice. For more information, see Latortue (2006, p. 484).

²⁷ For a summary of the potential benefits of smart subsidies, see Hill et al. (2014). They also argue that in the context of resource constraints, targeted subsidies (that are only accessible for a pre-determined category of customers) might be more appropriate than universal ones (that are accessible to all customers), provided that targeting strategies are well-designed and tested before implementation. Furthermore, targeted subsidies might be more effective in ensuring equality of access to microinsurance, given the fact that wealthier households are more likely to purchase insurance than poorer households and universal subsidies might be disproportionately beneficial to the wealthier groups.

²⁸ Extensive exclusions may create high financial risk for the poor insured, as 'they may drop even further below the poverty line', for example due to treatment costs not being covered. See Biener and Eling (2012, p. 89). High deductibles may increase inequity, as the poorest population cannot access health services. See Dror et al. (2009).

²⁹ The government may perceive the traditional risk control measures of insurance as socially unacceptable and prohibit their use.

³⁰ It is common to see that micro insurers voluntarily give up using those measures (e.g. they often charge flat rates or/and simplify policies voluntarily), either to save administrative costs or to fulfill the social target of microinsurance programmes.



understanding of and trust in the insurance mechanisms could be enhanced and, ultimately, microinsurance becomes more accessible for low-income households (Eling et al. 2014). However, the simplification of microinsurance policies often means reducing the use of exclusions, which are mainly designed to control moral hazard and adverse selection in insurance practice. Therefore, simplification (or standardisation) and lack of differentiation, in case particular clients may hide information from or lie to insurers, could ultimately be counterproductive in the longer term (Akerlof 1970). In addition to reducing exclusions, simplification could also be achieved by making microinsurance policies and their related processes (e.g. reporting and disclosure requirements) as simple as possible, so that they can be easily understood, even by illiterate people.³¹ In contrast to reducing the number of exclusions, easing the complexity of exclusions and increasing the readability of contract terms may cause less market distortion, as the tools to control moral hazard and adverse selection are still in place.

Second, the government could also intervene in the microinsurance market by encouraging the use of group insurance. Since all qualified group members are covered by similar policies without additional costs of individual customisation, administrative costs for the expansion of microinsurance could be reduced (Collins et al. 2009; Biener and Eling 2012). Moreover, since all members of an association or village are insured at the same time (which is of high social importance in many developing countries), mutual monitoring is possible, thus reducing the potential issue of moral hazard (Biener and Eling 2011). Adverse selection is also mitigated in group policies, because the decision to insure is based on collective decisions rather than on an individual's self-selection.³² Since group policies could reduce transaction costs and mitigate information asymmetries, government interventions via encouraging the use of group policies could enhance the effectiveness of microinsurance programmes.

Third, governments can intervene in the microinsurance market by stimulating the use of established channels (e.g. retailers, mobile phones, internet and call centres) and locally domiciled agents for product distribution. Since these distributors often have close ties with the local community, they could help to generate more trust in the insurance products and to expand microinsurance to low-income markets.³³ Furthermore, a partnership with distributors that already have financial transactions with the low-income market could save administrative costs, as micro-insurers could utilise these distributors to access new markets in a shorter term at

³¹ India, Brazil and the Philippines, for example, all require that microinsurance policies be easily understood. Taiwan includes a similar requirement but limits the number of perils covered under each policy. See Eling et al. (2014, p. 29).

³² See e.g. Mayers and Smith (1990) and Browne (1992). However, recent literature shows that group insurance alone is not sufficiently effective to entirely eliminate adverse selection. Adverse selection disappears over time if the group renews with the same insurer for a certain period of time. See Eling et al. (2017).

³³ Some studies have proved that the underwriting efficiency of microinsurance could be significantly increased if low-income people have more trust in the insurance market. See e.g. Cole et al. (2013) and Biener et al. (2014).



reduced transaction costs (see e.g. Merry et al. 2014). However, the risks are that these delivery channels often lack proper knowledge of insurance to deliver the relevant information (e.g. the risk of the insured) to the microinsurers to better charge risk-based premiums that reflect the insured's underlying risks (Smith et al. 2012). Consequently, monitoring costs may be increased and related adverse selection and moral hazard issues may arise, jeopardising the expansion of microinsurance. To address this concern, more training is necessary for local distributors (Biener et al. 2014) and a carefully designed licensing system is also important (but the requirements should be properly loosened to cater to low-income markets).³⁴

To summarise the criteria for assessing the effectiveness of government intervention in microinsurance, one could say that government intervention is effective when it is able to increase the availability of insurance for the poor and when certain instruments for controlling moral hazard and adverse selection are still available so that the intervention does not cause additional market distortion.

The microinsurance market and its regulation in China

The remarkable economic growth in China over the past few decades has significantly improved the living standards of many people, but great challenges remain. By the end of 2016, 23.9% of the Chinese population still lived below the poverty line of USD 5.5 per day, and this figure was much higher in rural areas.³⁵

Though poor people are mostly covered by social insurance in China, the protection from the scheme is limited. At the same time, poor people cannot afford to buy private insurance. Thus, they are vulnerable to a wide range of risks and are less protected on 'rainy days'. To provide a social safety net to the poor population and to increase their financial well-being, China joined the international working group on microinsurance in 2007. One year later, the China Insurance Regulatory Commission (CIRC)³⁶ launched personal microinsurance pilot projects (including life and personal accident insurance pilot projects) in the rural areas of nine provinces in China.³⁷ Meanwhile, the CIRC issued Regulations on Agricultural Insurance and the Notice of Related Matters on the Implementation of Systematic Management on the Qualification of Rural Insurance Agents (hereafter the 2008 Rural Agents Notice), which contains specific rules on how to distribute insurance in rural areas.³⁸

³⁴ For example, Wiedmaier-Pfister (2010) argues that requirements for microinsurance distribution channels should not be too strict to increase market resources, but should still maintain a certain level of customer protection.

³⁵ See the Poverty & Equity Data Portal of the World Bank, available at <http://povertydata.worldbank.org/poverty/country/CHN>.

³⁶ In April 2018, the CIRC merged with the China Banking Regulatory Commission (CBRC) in an effort to strengthen financial supervision.

³⁷ See the Plan on the Pilot Personal Microinsurance in Rural Areas (hereafter the '2008 Plan'), which was issued by the CIRC in June 2008 but is no longer applicable. In 2008, four insurance companies participated in the pilot microinsurance projects. This is reported by the CBIRC, available at <http://www.cbirc.gov.cn/cn/view/pages/index/index.html> (in Chinese).

³⁸ The 2008 Rural Agents Notice (Bao Jian Fa [2008] No.17) was issued by the CIRC on February 2008. As explained above, a large part of agricultural insurance is in fact microinsurance.



In 2009, the pilot projects were extended to another 10 provinces and permitted the inclusion of micro health and pension insurance products.³⁹ By the end of 2009, the pilot projects covered more than 11 million poor people,⁴⁰ but still accounted for only a small proportion of the total population living in poverty (see Table 1).

To further extend microinsurance coverage and promote the goal of inclusive insurance, in June 2012, the CIRC issued the Plan on Comprehensive Promotion of Personal Microinsurance (hereafter the 2012 Plan). The 2012 Plan terminates the previous pilot projects and expands the coverage of microinsurance to also include urban residents who live below Minimum Living Standard Security, as well as migrant workers without formal urban residential registrations. Moreover, the 2012 Plan removes the provision of micro pension insurance. By the end of 2017, 31 provinces in China had implemented personal microinsurance schemes covering approximately 110 million people⁴¹ (see Table 1).

Under the 2012 Plan, to enter the market in China, microinsurers are required to fulfil a set of prerequisites (e.g. strong risk management capability) and to submit a three-year business plan.⁴² Taken together, these high entry restrictions might hinder entry, and thus competition, in the Chinese microinsurance market. Indeed, microinsurance products were mainly provided by seven insurance companies in China (see Table 2) (Bester et al. 2018).

Collectively, these insurance companies provided a total number of 51 microinsurance products and most of these products (26 out of 51) are bundled term life and personal accident microinsurance that provides compensation for death and disability. Additionally, the overwhelming majority of these products were provided by the China Life Insurance Company, whose market share and premium income amounted to 90% and CNY 1.06 billion (or USD 0.15 billion)⁴³ in 2011, respectively (Yao 2017).

Currently, at the national level, the general regulatory framework for all commercial insurance in China, including microinsurance, is provided by the Insurance Law.⁴⁴ Specific regulations for microinsurance are provided by the 2012 Plan and by the Regulations on Agricultural Insurance.⁴⁵ The 2012 Plan provides regulatory rules for all personal microinsurance, while the Regulations on Agricultural Insurance provide specific regulations for personal and property microinsurance products that are distributed in rural areas (often referred to as Shenong Baoxian in Chinese).

³⁹ See CIRC's Notice on Further Expansion of the Pilot Personal Microinsurance in Rural Areas, was issued by the CIRC in April 2009 and is no longer applicable.

⁴⁰ The data are collected from the CBIRC's website, available at <http://www.cbirc.gov.cn/cn/view/pages/index/index.html>. Here, the data only included personal microinsurance products and do not include agricultural insurance.

⁴¹ The data are presented by Zhaoxing Wang, the vice president of the CBIRC, available at <http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=178501&itemId=915&generalType=0>.

⁴² See section 5(1) of the 2012 Plan.

⁴³ The currency in China is the Chinese Yuan (CNY). Throughout this article CNY 1 = USD 0.14.

⁴⁴ The Insurance Law was first adopted in 1995 and was subsequently amended in 2002 and in 2009.

⁴⁵ The Regulations on Agricultural Insurance were enacted by the State Council in November 2012 and came into effect in March 2013.



Moreover, the 2012 Plan encourages the government (both central and local) to play a supportive role in promoting the development of microinsurance, e.g. through public promotional campaigns.⁴⁶ The Regulations on Agricultural Insurance explicitly require that the government cooperate with insurers, engage in promotional campaigns, improve policyholders' insurance awareness, offer subsidies on premiums and provide tax exemption for insurers.⁴⁷

Government interventions in China's microinsurance market

In this section, we provide an overview of government interventions in the Chinese microinsurance market, followed by a critical analysis of their effectiveness in terms of whether they made insurance more widely available for a larger group of people without causing market distortion (moral hazard and adverse selection). We mainly focus on government interventions in four key areas: provision of subsidies, simplification, encouraging the use of group insurance and established distributional channels.⁴⁸ Moreover, our analysis is backed up by examples, most of which come from the local level. We first focus on subsidisation and then on government interventions aiming at reducing information problems and/or saving administrative costs. Finally, we discuss some practical issues related to these interventions.

Subsidisation

The Chinese government often intervenes in the microinsurance market by either providing *ex ante* subsidies to insurance premiums or by establishing a public fund for risk sharing (could be considered as *ex post* subsidies). Several local-level examples will be presented to analyse to what extent the conditions for premium subsidies that function effectively are met.

Ex ante subsidies

Wangcang County in Sichuan province (hereafter the 'Wangcang Case') can be used as a typical example for analysing the effectiveness of government intervention via *ex ante* subsidies.

In this case, the government of Wangcang county and the State Council Leading Group Office of Poverty Alleviation and Development (CPAD) have cooperated with China Life Insurance Company to introduce microinsurance into the national poverty alleviation programme since 2011. The products offered are term life or accident group insurance bundled with micro loans (see Table 3). These products feature

⁴⁶ See section 5(6) of the 2012 Plan. See also section 8 the 2008 Plan.

⁴⁷ See Articles 3 to 9 of the Regulations on Agricultural Insurance.

⁴⁸ Other government interventions are also possible (and can also be found in China), such as rules with respect to capital and solvency management and interventions to promote particular market practices. These are not discussed. For more information, see Chen et al. (2014).



Table 1 Personal microinsurance market overview in China

Year	Population (million)	Potential market (million)	Premium income (million, CNY)	Penetration rates (premiums as % of GDP)	Actual market (million)
2008	1328	197	42	0.0000013	2
2009	1335	NA	270	0.00081	11
2010	1341	149	7400	0.018	20
2011	1347	106	NA	NA	24
2014	1368	88	NA	NA	70
2017	1390	NA	NA	NA	110

Data source: Data on the population and GDP are obtained from <http://data.stats.gov.cn/easyquery.htm?cn=C01>. Data on premium income and the actual market are obtained from <http://www.cbirc.gov.cn/cn/view/pages/index/index.html>. Data on the potential market are obtained from <http://povertydata.worldbank.org/poverty/country/CHN>

low premiums (CNY 40/USD 5.6 in 2011–2013 and CNY 50/USD 7 in 2014) and a close connection with the Village Development Mutual Aid Fund (VMAF).⁴⁹ This means when an insured suffers harm from a disease or an accident that affects loan repayments, the insurer will offer the payment of the sum insured to the beneficiary (the VMAF or the one appointed by the insured).⁵⁰

Half of the microinsurance premiums were subsidised by the Wangcang government between 2011 and 2012. In 2011, merely 2000 villagers were insured by the two microinsurance products provided, covering 5.8% of the total population in Wangcang county (see Table 3). One year later, these figures respectively increased to 162,000 and 46.3%, and continued to rise in 2013 (see Table 3).

Therefore, government interventions in the Wangcang Case were successful in the sense that they increased the insured population between 2011 and 2013. Since 2013, however, the premium subsidies have been cancelled due to the financial stress of the local government. One year after the subsidies ended, the premiums increased from CNY 40 (USD 5.6) to CNY 50 (USD 7), and the insured population declined to 159,000. Theoretically, the sudden termination of premium subsidies in the Wangcang Case may make it difficult for microinsurers to raise premiums, ultimately leading to reduced willingness to purchase insurance from the low-income group. Additionally, it may also lead to adverse selection, as lower-risk individuals are more likely to drop out voluntarily, and the remaining insureds are of higher risk.

⁴⁹ This fund combines fiscal funds with the contributions of participating farmers to form mutual aid funds that are owned, used and jointly managed by all members.

⁵⁰ In the Wangcang Case, when the insured's village has the VMAF, the VMAF will be appointed as the first beneficiary automatically and the other beneficiaries can be appointed by the insured. By contrast, when the insured's village has no VMAF, the beneficiaries will be appointed by the insured. See Yao (2017, p. 61ff).



Table 2 Information on microinsurance providers in China (data collected in 2011)

Microinsurance provider	Total assets (CNY million)	Premium income for all commercial insurance products (CNY million)	Product type	Number of products offered	Number of group insurance products offered
China Life Insurance Company	1,583,907	318,276	Bundled Term Life and Personal Accident Insurance	9	2
			Personal Accident Medical Expenses Insurance	3	1
PICC Life Insurance Company	275,600	85,536	Term Life Insurance	4	2
			Bundled Term Life and Personal Accident Insurance	3	1
			Personal Accident Medical Expenses Insurance	2	1
			Term Life Insurance	1	NA
PICC Property and Casualty (P&C) Company Limited*	265,644	173,554	Agricultural Insurance	10	NA
			Bundled Term Life and Personal Accident Insurance	4	NA
			Property Insurance	2	NA
China Pacific Insurance Company Limited	164,000	42,300	Bundled Term Life and Personal Accident Insurance	3	1
New China Life Insurance Company	386,771	94,797	Bundled Term Life and Personal Accident Insurance	4	NA
China Post Life Company	11,699	8025	Bundled Term Life and Personal Accident Insurance	3	NA
Taikang Life Insurance Company	351,100	67,937	Term Life Insurance	1	NA
			Bundled Term Life and Personal Accident Insurance	2	NA

Data source: Data on product type and number of products offered are adapted from Bester et al. (2018). Data on premium income and total assets of all microinsurance providers are collected by the author from the China Insurance Yearbook (2012)

*Note that the PICC P&C Company Limited has indicated that they have 23 personal microinsurance products. However, information for only four is available here



Table 3 Information on the Wangcang case

Year	Premium per policy (CNY)	Insured population	Premium income (CNY)	Number of deaths	Number of injuries	Total compensation (CNY)	Insured ratio (%)	Net loss ratio (%)
2011	40 (50% are subsidised by the Wangcang government)*	20,000	810,000	17	382	370,000	5.8	45.7
2012	40 (50% are subsidised by the Wangcang government)*	162,000	6,480,000	48	502	1,910,000	46.3	29.5
2013	40 (fully paid by the insured)	206,000	8,240,000	117	2817	4,200,000	58.9	51
2014	50 (fully paid by the insured)	159,000	8,000,000	NA	NA	NA	NA	NA
2016.7	50 (fully paid by the insured)	133,000	NA	NA	NA	3,290,000	NA	56.3

Data source: The data in 2011 and 2013 are adapted from Yao (2017, P. 63); the data in 2014 and 2016.7 are collected from the CBIRC's website

*Note that the Wangcang government only provides subsidies to persons who have joined the Village Development Mutual Aid Funds (VMAP). For others, subsidies are not provided



Ex post subsidies

Government intervention via *ex post* subsidies is often seen in the ‘Government-Bank Security Model’, where the local government intervenes in risk sharing. In that model, when a loan defaults, microinsurance products (e.g. government-secured insurance and small-amount loan guarantee insurance) are provided as a form of guarantee that typically covers up to 70% or 80% of the lenders’ (normally banks or RCCs) losses (see Table 4). Other parts of the losses will either be shared by the lenders themselves, together with the guaranteed funding provided by the government, or will be solely covered by the government’s guarantee fund if these losses are within certain limits (see Table 4). The borrower will fully or partially pay (with government subsidies) for the insurance.

Government interventions via *ex post* subsidies (or risk sharing) seem to work well in China, as the lender becomes more willing to grant loans. Moreover, since both the risks and costs for administering microinsurance could be reduced through the government’s *ex post* risk sharing, insurers may have stronger incentives to provide microinsurance. For example, in the Sanshui district (Guangdong province), the total number of loans offered by lenders increased from 1949 to 5802 between 2012 and 2016.⁵¹ Moreover, by the end of 2012, 17 cases of non-performing loans were reported and in these cases, most of the lenders’ losses (CNY 1.725 million out of CNY 2.161 million) were covered by government-secured microinsurance.⁵²

Promoting innovative market practices

Another common government intervention in the Chinese microinsurance market aims at promoting innovative market practices so that information problems and/or administrative costs can be reduced. Specifically, in China, this type of intervention can be done either by requiring insurers to provide simple (simplified terms with few exclusions) and understandable microinsurance policies (see [Simplification of contract terms](#) section),⁵³ or by stimulating the use of group policies (see [Encouraging the use of group policies](#) section) and established distribution channels (see [Promoting product distribution](#) section).

⁵¹ See the website of the Ministry of Agricultural and Rural Affairs of the People’s Republic of China, available at http://www.moa.gov.cn/ztlz/jrfwnyxdhgft/sdms_a1012/201710/t20171012_5838609.htm (in Chinese).

⁵² The data are reported by Finance China, available at <http://finance.china.com.cn/roll/20130530/1511737.shtml> (in Chinese).

⁵³ All microinsurance products in China are required to satisfy specific characteristics, including low premiums, appropriate benefits, an understandable policy and simple underwriting and claims. See sections 1.1 and 2.3 of the 2012 Plan.



Table 4 Typical examples of the government-bank security model

	Insurance provider	Name of the microinsurance product	Premium (CNY)	Benefit (CNY)	Maximum amount of loan (CNY)	Eligibility
Sanshui district, Fushan city, Guangdong province	PICC Property and Casualty (P&C) Company Limited	Government-secured insurance (or Zhengyinbao in Chinese)	2% of the loan amount (50% is paid by the insured and 50% is paid by the government's guarantee fund (10,000,000))	In case of loan defaults, the lender will bear 20% of the losses and the remaining 80% will be covered by the insurance. But when the remaining 80% loss is larger than the insurer's annual coverage limit (that is, 120% of the insurer's annual premiums), the lender (20%) and the local government (80%) will share the losses beyond that limit. Moreover, a deductible is applied, which amounts to 20% of the loan amount	50,000 to 5,000,000 depending on the different types of enterprises	Agricultural enterprises, farmers' professional cooperatives, farmers' economic cooperatives, rural collective economic organisations and individual farmers



Table 4 (continued)

Insurance provider	Name of the microinsurance product	Premium (CNY)	Benefit (CNY)	Maximum amount of loan (CNY)	Eligibility
Guangzhou city, Guangdong province	PICC Property and Casualty (P&C) Company Limited Small-amount loan guarantee insurance	2% of the loan amount (50% is paid by the borrower and 50% is paid by the government)	In case of loan defaults, the lender will bear 20% of the losses and the remaining 80% will be covered by the insurer. But when the insurer's loss ratio exceeds 150% at the end of each quarter, the insurer's losses will be fully covered by the government's guarantee fund (max. 30,000,000). Moreover, the provision of insurance will be ceased if the rate of overdue loan reaches 10%	NA	Agricultural enterprises, technological enterprises, small enterprises, large farmers, urban and rural entrepreneurs



Table 4 (continued)

Insurance provider	Name of the microinsurance product	Premium (CNY)	Benefit (CNY)	Maximum amount of loan (CNY)	Eligibility
Ningbo city, Zhejiang province	Jointly provided by the PICC Property and Casualty (P&C) Company Limited; Pingan Property & Casualty Insurance; China Life Property Insurance Company; China Continent Insurance Company; China Pacific Property Insurance Company Limited	Small-amount loan guarantee insurance 2.3% of the loan amount (fully paid by the borrower)	In case of loan defaults, the lender will bear 30% of the losses and the remaining 70% will be shared among five insurers. But when the insurer's loss ratio exceeds 150% at the end of each quarter, the insurer's losses will be covered by the government's guarantee fund (max. 10,000,000). Moreover, the provision of insurance will be terminated if the rate of overdue loan reaches 10% or the loss ratio exceeds 150%	500,000 to 3,000,000 depending on the risks of the borrower	Small enterprises, individually-owned businesses and rural/urban entrepreneurs

Data source: Information on Zhengyinbao is collected from http://www.cbirc.gov.cn/view/pages/ItemDetail_gdsj.html?docId=670&docType=1. Information on the small loan guarantee insurance in Guangzhou is collected from the Measures for the Administration of Policy-based Small Loan Guarantee Insurance Funds of Guangzhou (Revised). Information on the small loan guarantee insurance in Ningbo is collected from <http://finance.sina.com.cn/money/insurance/bxfg/20091014/16213079457.shtml>

Simplification of contract terms

Our analysis showed that simplifying microinsurance contracts is effective in terms of protecting policyholders from onerous contract terms and saving transaction costs, thereby making microinsurance more attractive to newly-entered clients. However, our analyses also indicate that simplification may also entail certain risks of adverse selection and moral hazard, especially if simplification is done merely by reducing the use of exclusions rather than by easing the complexity of policies and claims processes.

In China, these risks may not be so severe. On the one hand, the sum insured is capped at a low amount and policyholders still retain a considerable proportion of the risk. On the other hand, the requirement of simplification is poorly enforced in practice.⁵⁴ An illustrative example is the Rural Micro-Personal Accident Insurance Policy Terms (Ren Bao Cai Xian (Bei-Yi Wai) [2015] Zhu No.33), provided by the People's Insurance Company of China Property and Casualty Company Ltd (PICC P&C). In the standard microinsurance policy, 10 grounds of exclusion are provided to relieve the insurer's coverage for non-accidental risks. By contrast, the conventional personal accident insurance policy of PICC P&C provides 18 grounds of exclusion.⁵⁵

If purely judged by the decrease in the number of exclusion clauses, the microinsurance policy provided by PICC P&C seems to be simplified. However, if we look carefully into the contents of the policy, there is no significant simplification. Some of the exclusion clauses, such as exclusions for pre-existing injuries, heart stroke, altitude sickness and infections, are not removed but are instead merged to the definition of non-accidental harms.⁵⁶ The other deleted exclusion clauses (e.g. exclusions for cosmetic and plastic surgery) are often irrelevant for rural clients *per se*.

Therefore, in practice, microinsurers in China tend to technically reduce the number of exclusions, without any real simplifications. This approach may, at least in theory, pose obstacles to clients' understanding of microinsurance and reduce their willingness to insure. However, this practice might be good at avoiding increased levels of moral hazard and adverse selection, as extensive exclusions are still included.

Encouraging the use of group policies

As indicated in the section A law and economics analytical framework, government intervention by encouraging the use of group policies may have multiple benefits in

⁵⁴ This is mainly because the 2012 Plan fails to indicate whether insurers who fail to comply with this requirement are subject to fines, suspensions or revocations.

⁵⁵ See article 2.2 of Rural Micro-Personal Accident Insurance Policy Terms (Ren Bao Cai Xian (Bei-Yi Wai) [2015] Zhu No.33). Here, we use the personal accident insurance contract issued by the same insurer to have a relevant comparison.

⁵⁶ See article 8.1 of the Rural Micro-Personal Accident Insurance Policy Terms (Ren Bao Cai Xian (Bei-Yi Wai) [2015] Zhu No.33).



terms of both saving administrative costs and mitigating problems of moral hazard and adverse selection. These theoretical benefits are to some extent confirmed by the success of the Jinzhong Branch of the China Life Insurance Company (hereafter the 'Jinzhong Case'). This case is rather important, and also quite representative, because it is the first attempt in China to sell group microinsurance policies (Bester et al. 2018). Other group policy practices mostly follow this model.

In the Jinzhong Case, group microinsurance products were provided by the Jinzhong Branch of the China Life insurance Company to Dongpao village of Shanxi province since January 2009. These microinsurance products provide coverage to all qualifying villagers, who are collectively the insured group. Each of the villagers can access an annual insurance benefit of CNY 10,000 (USD 1400) with an annual premium of CNY 20 (USD 2.8), of which 20% is subsidised by the village committees.⁵⁷ Microinsurers could, however, vary the level of premiums depending on the specific risk profiles of different villages.

The group microinsurance offered in the Jinzhong Case expanded rapidly in practice. In 2009, the first group policy provided by the Jinzhong branch covered only 1332 villagers (Bester et al. 2018). By the end of 2010, these microinsurance products were introduced by the Jinzhong branch in three counties, 31 towns and 1326 villages in Jinzhong city of Shanxi province, providing coverage to 780,000 villagers (29% of insurable farmers in the city) (Bester et al. 2018). In that year, the Jinzhong branch sold 727,000 group microinsurance policies and nearly half of their premium income was attributed to such microinsurance (Bester et al. 2018).

As discussed in the section A law and economics analytical framework, selling group microinsurance policies has the advantages of saving on transaction costs and remedying asymmetric information. These group policies are very popular in China. The China Life Insurance Company, PICC Life Insurance Company and the China Pacific Insurance Company Limited all developed a variety of group microinsurance policies, providing either death benefits if the insureds pass away during a specified period of time or coverage for accidental deaths, disabilities and medical expenses (see Table 2).

In contrast, microinsurance products sold on an individual basis (often referred to as the 'Individual Sales Model') are less popular. In this model, microinsurance is distributed mostly by rural marketing staff or other persons with good reputation in local communities. Thus, product distribution is very time intensive and often involves high costs (Bester et al. 2018). Not surprisingly, this model has been proven as not commercially viable for microinsurers and has been applied in only a few circumstances (Bester et al. 2018).

⁵⁷ This is reported on China Life's website, available at www.e-chinalife.com/news/gongsixinwen/detail2136910.html (visited on 18 September 2020).



Promoting product distribution

In China, the government often intervenes in the microinsurance market by facilitating cooperation between microinsurers and established networks, e.g. rural banks,⁵⁸ the postal system⁵⁹ and government authorities⁶⁰ in product distribution, premium collection and promotional campaigns.⁶¹ Our discussion in the section A law and economics analytical framework indicated that this intervention might be effective in facilitating the expansion of microinsurance, as the established channels are extensive⁶² and better connected with low-income people. Therefore, microinsurers could utilise these networks to access new markets in a shorter period of time at reduced transaction costs.

These theoretical predictions are to some extent confirmed by the examples of government intervention at the local level in China. For example, in both the Jinzhong Case (where microinsurance products are normally distributed through village committees that are common and extensive throughout rural China) and the Wangcang Case (where the local government has been involved in almost every aspect of product promotion and distribution),⁶³ rapid growth of the insured population, at least in the short run, is noticed.

However, encouraging the use of these established delivery channels in microinsurance distribution in China might be risky since it could lead to moral hazard and adverse selection. These risks arise because the staff of these channels often lack insurance literacy and are therefore not able to deliver useful information to microinsurers on risk differentiation and management. Moreover, even if these distributors are trained to know the details of insurance⁶⁴ or are licensed,⁶⁵ they may still be

⁵⁸ Each bank branch is allowed to sell microinsurance products from, at most, three different insurance companies. See article 13 of the Notice of China Banking Regulatory Commission on Further Strengthen the Sales and Risk Management of Bancassurance Business of Commercial Banks (Yin Jian Fa [2010] No. 90).

⁵⁹ The microinsurance products of the China Postal Life Insurance Company are distributed through the postal system. By the end of 2013, these products covered 77,200 individuals. See the China Insurance Yearbook (2014).

⁶⁰ These may include the Women's Federation, village committees, cooperatives, supply and marketing cooperatives, health centres in villages, the Family Planning Associations and networks of the New-type Rural Cooperative Medical Scheme (NRCMS). See section 5(1) of the 2008 Plan. The NRCMS networks include village committees, village health centres and cooperative communities.

⁶¹ Section 4(5) and Section 5(6) of the 2012 Plan.

⁶² For example, by the end of 2014, the China Postal Life Insurance Company had already established 26,890 service outlets, of which 73% were located at or below the county level. See the China Insurance Yearbook (2015, 394). These service outlets are able to provide a 'one-stop' service for the underwriting, reporting and settling of microinsurance claims. See Bester et al. (2018, p. 67).

⁶³ Increasing the insured ratio is even written in the annual working plan of the local government. It is given 5% proportionate importance in the government officials' year-end promotion evaluation. See Yao (2017, p. 149).

⁶⁴ For example, in Bayan Nao'er, a city in Inner Mongolia Province, local officials are required to take at least 30 h of training before they can work as agents. See the Notice on Bayan Nao'er Branch of China Life Insurance Co. Launching Personal Microinsurance Pilot Projects in Rural Areas (Ba Zheng Ban Fa[2010] No. 36), which was issued by the local government on 2 July 2010.

⁶⁵ In rural China, farmers with high prestige can be granted insurance agent certification directly, without passing or even attending the qualification exam. See section 2(2) and section 2(3) of the Notice of



inferior to professional insurance agents in assisting insurers to control moral hazard and adverse selection.

Practical issues

Despite the benefits in terms of improving the accessibility of microinsurance, there are several practical issues associated with government intervention in the Chinese microinsurance market, which may hinder the functioning of these interventions.

Government intervention via *ex ante* subsidies, and the related price selling, may leave little room for the insurer to make a profit and may also mean that diversified microinsurance products that satisfy customers' needs are not provided.⁶⁶ For example, in the Wangcang Case one of the first problems was that the price of microinsurance is limited to CNY 50 (USD 7), while the costs (including distributional costs, tax, policy costs, employee's welfare and the costs incurred during claims settlement) already accounted for nearly 33% of this. Moreover, given the fact that the net loss ratio rose to 56.3% in 2016 (see Table 4), there seems to be little room left for microinsurers to earn a profit. A second problem is that the needs of migrant workers are largely ignored, although these workers represent the majority of the rural working group.⁶⁷ For example, in Longfeng township (Wangcang county), those insured reported seven accidental death claims in 2013; five of these claims involved the death of migrant workers (Yao 2017).

Second, government intervention via encouraging the use of group insurance may neglect insureds' individual needs in terms of product type and benefit level (this problem featured in the Jinzhong Case). These problems are confirmed by a report from the CIRC of Shanxi province. This report states that the growth rate of rural microinsurance sold in Shanxi slowed down in 2011 and even became negative in 2012, with a renewal rate of only 55%.⁶⁸ The reasons cited were that the premiums were too high and the portfolio of products offered was too limited. Furthermore, it was also reported that some group members were not even aware they were insured and this may severely harm their interests.

Third, government intervention via *ex post* subsidies (or risk sharing) might involve complicated procedures for applying for microinsurance. For example, in the Government-Bank Security Model, the procedure for applying for microinsurance is reported to be too complicated, as the local governments are also included in the

Footnote 65 (continued)

Related Matters on the Implementation of Systematic Management on the Qualification of Rural Insurance Agents, which was issued by the CIRC on February 2008.

⁶⁶ This is already evident from the fact that more than 50% of the microinsurance products offered by the seven major microinsurance providers in China are bundled term life and personal accident microinsurance. See Table 2.

⁶⁷ For example, in 2013, China had approximately 158 million migrant workers, accounting for 63% of the rural worker group. The data are available at http://www.chinadaily.com.cn/china/2012-04/28/content_15166329.htm.

⁶⁸ This report was originally presented by Tan Xuequng from Shanxi CIRC supervisory office on 13 September 2012. It was cited in Bester et al. (2018, p. 66).



credit application process. This significantly increased the number of stages of loan approval (Yao 2017).

Fourth, government intervention via product distribution may also lead to certain practical issues. This can be illustrated by the ‘Dangyang Case’, where microinsurance is distributed through the established networks of the New-type Rural Cooperative Medical Scheme (NRCMS). Normally, these microinsurance products are medical care microinsurance or accident microinsurance, which provide supplementary coverage to the NRCMS. The risk is that the workload of microinsurers could be excessive, as the microinsurance products provided are often bundled with the NRCMS and may thus experience rapid growth in the insured population. This could impose a rather heavy workload on the commercial insurer and may even go beyond its management capacities.⁶⁹ For example, the China Life Insurance Company reported that in the last three months of 2008, the number of people insured by their microinsurance increased by 157,000 in Dangyang county and it took almost three months for the insurer to complete the work.⁷⁰ Moreover, there is another practical issue: clients may misunderstand the nature of microinsurance. For example, the NRCMS is totally free and is compulsory, whereas microinsurance is not (Yao 2017). Therefore, when the nature of microinsurance is not well explained by the distributor (which is often the case in practice), the bundling may harm the client’s trust in microinsurance and may reduce their willingness to buy in the future. Furthermore, since microinsurers may pay the networks of the NRCMS for product distribution, these networks could be incentivised to pressure customers to buy microinsurance (Yao 2017).

In summary, government interventions can function properly in practice, on the condition that certain solutions are available to resolve particular practical issues. First, diversified microinsurance products that meet customers’ real needs have to be provided and insurers have to be able to make sustainable profits (as was shown in the Jinzhong and Wangcang Cases). Second, the interests of group members should be taken into account (as shown in the Jinzhong Case).⁷¹ Third, the procedure for applying microinsurance has to be simple (as shown in the Government-Bank Security Model). Fourth, microinsurance products have to be clear and well explained, especially when they are bundled with social insurance schemes that are compulsory and free (as shown in the Dangyang Case). Without these solutions there may be obstacles to the effective functioning of government intervention in microinsurance.

⁶⁹ Even though the insurer can hire more staff, they are unlikely to do so within a short period of time.

⁷⁰ This report is cited in Yao (2017, pp. 147–148).

⁷¹ For example, the General Principles of European Insurance Contract Law (PEICL) hold that group insurance organisers should act dutifully, in good faith and take the interests of group members into account. Furthermore, they should, without undue delay, inform those insured about the existence of their insurance contracts, the contents of their coverage, the measures for preserving coverage and the claims procedure. See Article 18:102 and 18:202 of the PEICL.



Conclusion

In this article, we first reviewed the existing law and economics literature on government intervention in insurance and we applied the findings to microinsurance. Government intervention in the microinsurance market could be aimed at boosting demand from targeted clients, improving affordability, eliminating information problems and reducing administrative costs. The only danger is that government interventions may, under certain conditions, lead to increased moral hazard and adverse selection. This may be the case when government subsidies are unstable or not smartly designed (e.g. risk adjusted, more targeted), microinsurance contract are simplified by reducing exclusions rather than reducing the complexity of policies, product distributors are poorly trained or improperly licensed or the low-income insured lack incentives to renew their insurance policy.

Next, we used the microinsurance market in China as an illustrative example to investigate whether government interventions could increase the accessibility of microinsurance and whether there are built-in instruments in Chinese microinsurance projects to cope with potential market distortion (moral hazard and adverse selection). By using several examples from local practice, we find that the Chinese government often lacks proper instruments to control moral hazard and adverse selection and, as a result, government intervention may to some extent increase the risk of market distortion.

Within the limited scope of this article, we could only provide a few examples showing the large variety of government intervention in the microinsurance market in China. However, we certainly do not claim that the results are representative of the whole of China, as we could only show the working of typical government intervention (not all) in the Chinese microinsurance market. Moreover, we can neither claim any clear causality between government intervention and the increase in the availability of insurance, nor confirm that certain government intervention could indeed increase the risks of moral hazard and adverse selection, as our study lacks empirical robustness and may suffer from selection bias. Still, the statistics and the examples are interesting as they could indicate not only a correlation between particular government intervention and increased access to microinsurance for the poor, but also identify under what specific conditions these interventions may negatively affect moral hazard and adverse selection.

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Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states that there is no conflict of interest.



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