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Pánek: Editorial

Harmáček et al: Motives of territorial allocation of Japanese development aid: self-interest, altruism or merit?

Pelzom & Katel: Youth Perception of Agriculture and potential for employment in the context of rural development in Bhutan

Schlossarek: The Relevance and Meaning of Charity in the Context of Micro-finance

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Front page: Gaedu College of Business Studies, an autonomous government college under the Royal University of Bhutan. Photo is authored by Afifa Afrin and released under the Attribution-ShareAlike 3.0 Unported (CC BY-SA 3.0) license.

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Editorial

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Palacký University Olomouc, Czech Republic

Dear colleagues,

You now have the opportunity to read the sixth issue of the **Development, Environment and Foresight** journal, published by the Department of Development and Environmental Studies, Palacký University, Olomouc, Czech Republic.

The journal is among others indexed by the ERIH PLUS database. The European Reference Index for the Humanities and the Social Sciences (ERIH PLUS) was created and developed by European researchers under the coordination of the Standing Committee for the Humanities of the European Science Foundation (ESF). The ERIH lists, which initially covered only humanities disciplines, were first published by ESF in 2008, while revised lists were made available in 2011-2012. In 2014, responsibility for the maintenance and operation of ERIH was transferred to the NSD – Norwegian Centre for Research Data. The reference index at NSD is called ERIH PLUS in order to indicate that it has been extended to include the social sciences.

The first paper in this issue is authored by Jaromír Harmáček, Miroslav Syrovátka and Pavla Vítová (all from Palacký University Olomouc, Czech Republic) and focuses on what are the motives of territorial allocation of Japanese development aid. After reviewing 12 available empirical studies with some inconsistent results, the authors applied regression analysis over the recent and relatively long period (1994–2014). The overall results is that, the factors measuring governance, democracy and freedom are all significant determinants – Japan tends to reward countries that have better governance and higher level of freedom and democracy. If these institutional factors increase the effectiveness of aid, Japanese aid allocation can be viewed positively. On the other hand, the dynamics of economic growth is not a significant factor – Japan does not reward countries growing faster with more aid.

The second paper presented by Tshering Pelzom and Om Katel from Royal University of Bhutan aims at Youth Perception of Agriculture and potential for employment in the context of rural development in Bhutan. In Bhutan, agriculture provides employment and livelihoods to more than half of the total population. Therefore, this paper aims to provide the ways on how youth can be attracted and engaged in agriculture sector and its implications to food security of Bhutan.

The last paper of this issue is authored by PhD student from the Department of Development and Environmental Studies at Palacký University Olomouc, Martin Schlossarek. The paper explores the Relevance and Meaning of Charity in the Context of Microfinance. In this paper the author claims that it is necessary to clearly distinguish between charitable and commercial forms of microfinance. The issue is especially important for (potential) donors to microfinance institutions, which rely on fundraising to finance their operations.

Therefore he proposes theoretical parameters for charitable microfinance institutions and for the identification of charitable products.

We hope you enjoy this issue and we are looking forward to the next one. We would like to motivate and invite other authors to contribute to the knowledge and expertise in the areas of development, environment and foresight by sending their submissions to the editorial board of the DEF journal. The aim of the journal is to cultivate academic discussion in the scope of the journal as well as beyond its borders.

Thank you for your support

Jiří Pánek // managing editor

Motives of territorial allocation of Japanese development aid: self-interest, altruism or merit?

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Abstract

The paper analyses factors affecting territorial allocation of Japanese development aid. After reviewing 12 available empirical studies with some inconsistent results, we applied regression analysis over the recent and relatively long period (1994–2014). The analysis brings three main conclusions. First, Japan's interests tend to be relatively less important factor than found in other studies, with some role for export/trade that may have diminished recently. Second, there is a middle-income effect in Japan's allocation, indicating only moderate support for recipient countries' needs hypothesis. Third, Japan tends to reward countries that have better governance and higher level of freedom and democracy.

Key words: Official development assistance; foreign aid allocation; aid donor; Japan; panel data regression analysis

Introduction

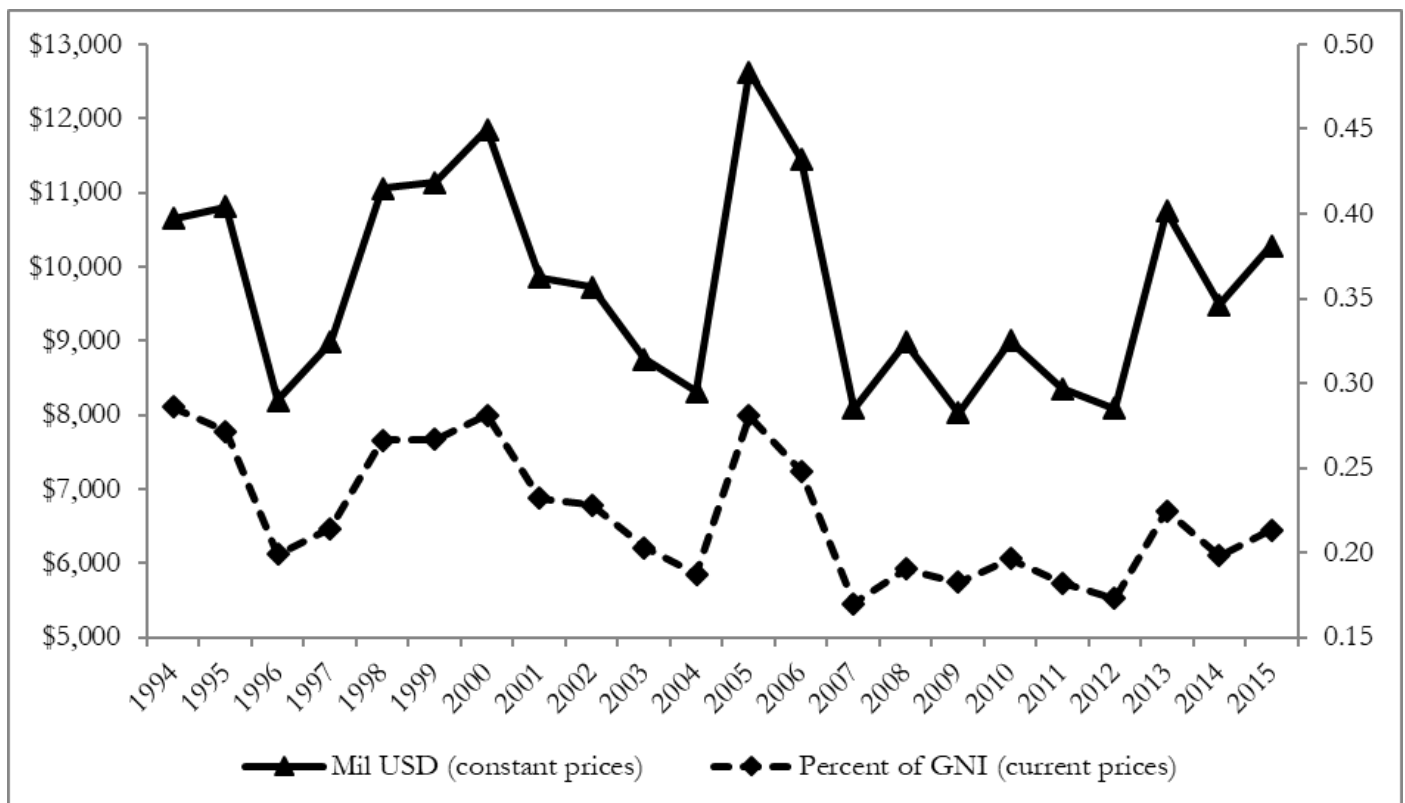
This paper attempts to shed light on the factors of allocation of Japanese development aid. In terms of the amount of development aid provided Japan is one of the largest global donors. Factors that affect territorial allocation of Japanese aid are therefore important not just from the perspective of Japanese foreign policy, but also globally. Although there are more than ten empirical studies on factors of Japanese aid allocation, there is not a clear consensus on the role of some of the factors. Our study contributes to the evidence on the factors of Japanese aid allocation as it uses more up-to-date data than any other research we are aware of. Also, we use relatively long recent period (1994–2014) to identify the significance of the factors.

The paper is structured as follows. In the following part of this section we provide a short overview of Japanese aid; its quantity and territorial allocation. In section two we review the literature as for the factors of aid allocation and methods commonly used in aid allocation studies. The research part of the paper follows: we describe our variables and data and justify the selection of our model (section three), and we summarise the results of the regression analyses (section four). In the final part (section five) we confront our results with those from previous studies.

Japan is one of the donor countries grouped in the Development Assistance Committee of the Organisation for Economic Co-operation and Development (OECD/DAC). In 2015 Japan provided 9,203 mil USD (current prices) as net Official Development Assistance (ODA), the most common definition of development aid (all data that follow in this section are from OECD, 2016b). In terms of absolute quantity, Japan was the fourth largest donor of 28 OECD/DAC member countries, representing about 7 per cent of the group's total ODA. Less bright picture emerges when the aid is expressed in relative terms, as a percentage of donor country's Gross National Income (GNI). In 2015 Japan provided 0.21 per cent, that is, a significantly lower share than OECD/DAC country average of 0.41 per cent, placing Japan on the 18th place.

The evolution of Japan's aid flows over the last two decades is illustrated in Figure 1. The annual amount of Japan's aid was fluctuating between 8,000 and 13,000 mil USD (constant prices), but with no clear trend over the period. ODA/GNI percentage has generally followed the absolute aid quantity with no clear trend overall, but the second half of the period has shown a lower percentage than the first half (in spite of the 2005–2006 peak that belongs to the second period).

Figure 1: Japan's ODA (1994–2015)



Source: based on data from OECD (2016b).

Most of Japan's ODA is provided on a bilateral basis (rather than multilateral); in 2015 Japan provided almost 75 per cent of its aid bilaterally (6,872 mil USD out of the total 9,203 mil USD). Taking into account just the bilateral aid allocations, the largest share of aid was

provided to South and Central Asia (2,600 mil USD; 38%) and to Sub-Saharan Africa (1,585 mil USD; 23%). It is also worth noting that a significant part of Japan's bilateral aid is unspecified, either by country or by region. The largest recipients were Viet Nam (1,201 mil USD; 17%), India (970 mil USD; 14%), Bangladesh (419 mil USD; 6%), Myanmar (392 mil USD; 6%) and Iraq (364 mil USD; 5%). The allocation to these five countries constituted almost half (49%) of total Japan's bilateral aid.

What do we know? A short review of literature on factors of (Japanese) aid allocation

The factors of aid allocation are usually divided into three basic groups. The first group of factors is denoted as donors' interests. To a substantial extent, this category reflects the selfish motives of aid allocation. The factors in this group are usually related to measures of bilateral trade with recipient countries or donors' export to recipient countries (for example, Alesina and Dollar, 2000; Berthélemy, 2006; Canavire et al., 2005; Lundsgaarde et al., 2010). Additionally, variables describing special relations between a donor and a recipient are also used in this regard, such as dummy variables for common colonial links (Schraeder et al., 1998 and many others), for special Japanese ties to Asia (Berthélemy, 2006) and for US special ties to Egypt or Israel (Alesina and Dollar, 2000). Variables measuring geographic proximity (Collier and Dollar, 2004), language proximity (Lundsgaarde et al., 2010), religious, cultural or historical proximity (Alesina and Dollar, 2000; Younas, 2008; Opršal et al., 2016) between a donor and a recipient also fall into this category. It is predicted that the more intense the donors' interests are and the closer the mutual relationships are, the higher the volumes of aid the donor provides to that particular recipient. This theory is usually confirmed by empirical results.

Additionally, one specific factor is often used in regression studies as a potential factor of Japanese aid allocation – the importance of US security and economic interests. This is called the *Gaiatsu* hypothesis according to which Japan has followed the US interests in its aid allocation, particularly during the Cold War and in the first half of the 1990s. While it is often classified as a specific factor, we understand it as part of the broader framework of Japan's political interest.

The second group of factors measures recipient countries' needs for aid. This category reflects the altruistic motives of aid allocation. The factors in this group can be divided into two major groups. *Economic needs* of recipients are usually measured by the level of economic development, that is, by GDP per capita or similar variables (Harrigan and Wang, 2011 and many others). *Social needs* are captured by indicators of social development, such as infant mortality rate (Berthélemy and Tichit, 2004), caloric intake (Schraeder et al., 1998), literacy rate (Lundsgaarde et al., 2010). Total population must be also controlled for, as poor recipient countries with larger populations, *ceteris paribus*, are likely to require higher absolute amount of aid (Neumayer, 2003). Theories predict that higher volumes of aid are associated with greater recipients' needs (Berthélemy, 2006 and many others). The empirical evidence supports the theory of altruism in aid allocation when ap-

proximated by economic factors; however it is much weaker with regard to social factors. Recently, institutional and/or political factors have been identified as a third group of aid allocation factors. This category of factors reflects both the merit in aid allocation (for example Hoeffler and Outram, 2011) as well as effectiveness of aid (Burnside and Dollar, 2000). This group of factors is operationalised by indicators measuring various aspects of institutional quality and political development. The most common are the different sub-indices of (or the average over) the Worldwide Governance Indicators (Opršal et al., 2017), the level of civil liberties and political rights (Berthélemy and Tichit, 2004) and the type of political regime (Lundsgaarde et al., 2010). According to theories, donors might have a tendency to reward a better institutional and political performance of recipients as well as more democratic and freer countries with higher volumes of aid. This argument is also supported by the influential study of Burnside and Dollar (2000), according to which the quality of recipient countries' institutions has a positive influence on aid effectiveness; donors should thus reward better institutional performance of recipients with higher volumes of aid. However, the empirical results do not always fully confirm theoretical predictions. One reason for that can be linked to the problems of approximation of institutional quality or political development with data. For example Canavire et al. (2005) argued that the significance of institutional quality for aid allocation varies according to the variables that are used to measure it.

In the rest of this section, we review the results of studies on Japanese aid. Schraeder et al. (1998) investigated aid allocation of four donors including Japan to 36 countries in Africa and found out that economic self-interest was a key determinant of Japanese foreign aid toward Africa during the period under review. However, they also detected some support for the recipient needs hypothesis: according to the authors, Japanese aid was directed to poorer African countries, but with better health and other social conditions. Similarly, Alesina and Dollar (2000) examined aid allocation of 21 donors (including Japan) into 180 recipient countries over 1970–1994. They found out that Japan seems to care mostly about its own political and economic interests, does not reward good policies nor institutions and is less sensitive (than other donors) to the income level of the recipients (in fact, according to the authors, Japanese aid allocation has one of the lowest elasticities to income). Canavire et al. (2005) analysed aid allocation of nine donors including Japan in 1999, 2000, 2001 and 2002 and concluded that Japanese aid was driven by selfish export-related motivations while it was weakly poverty and policy oriented.

Berthélemy and Tichit (2004) investigated aid allocation of 22 donors (including Japan) into 137 recipient countries over 1980–1999 and reported Japan to give more aid to its trading and investment partners than most of other large donors do. Using the same sample data, but different analytical approach, Berthélemy (2006) reported Japan to be a „moderately egoistic“ donor because the trade parameter was non-significantly different from those of other donors. However, when the Asian dummy was dropped, the Japanese trade parameter became significantly different and Japan was denoted as an ”egoistic“ do-

nor. Younas (2008) focused particularly on the role of different types of Japanese exports in aid allocation. He found that Japan provided more aid to recipients importing Japanese machinery and transportation equipment. He also observed that Japanese aid was directed to countries receiving more aid from multilateral and other bilateral donors and countries with smaller population. No religious affinity was found to play a role in Japanese aid allocation.

Harrigan and Wang (2011) analysed aid allocation of seven donors including Japan into 153 recipient countries over a long period of 1966–2008 and found out that Japanese aid was not oriented toward recipients' needs. However, a different analytical approach by the same authors did not confirm their original results, having shown Japanese aid to be driven by recipients' needs as well. There are other papers revealing that Japanese aid allocation follows the altruistic motives as well as factors of merit. Angeles et al. (2008) examined allocation of seven donors into 104 recipient countries over 1984–2003. Although they concluded that less altruistic motives such as commercial interests played a role in Japanese aid allocation, they also found out that Japanese aid was significantly more oriented toward poor countries' needs in post-1998 period. The same was true for Japanese aid selectivity based on institutional quality, i.e. developing countries with better institutions received more aid, especially after 1998.

Tuman and Ayoub (2004) investigated Japanese aid flows into 35 recipient countries in Africa over 1979–1998. They concluded that Japan allocated its aid to poorer countries, countries at a greater risk of food insecurity, and to countries with greater respect for human rights (that is, recipients needs were well taken into account) while aid was used only partly to support Japanese trade. The authors also discovered a link between the US security interests and Japanese aid allocation while no such links were detected in regard with US economic initiatives in Africa. In their reappraisal for 86 recipients over 1979–2002, Tuman et al. (2009) found that Japanese aid allocation was strongly determined by the recipient needs while the *Gaiatsu* hypothesis was only partially supported. Remarkably, they also ascertained that Japanese economic interests had the opposite effects than expected: Japanese aid flew to poorer countries that did not trade with Japan and that were not oil exporters.

Cooray et al. (2005) analysed Japanese aid allocation into 96 recipient countries over 1981–2001 and revealed that Japan took both its interests as well as the recipients needs into account. They also discovered income and population biases in Japanese allocation (aid increased with recipients' per capita income and population up to a threshold, and then it decreased), as well as a bias toward Asian countries. Katada (1997) examined Japanese aid flows into 19 recipient countries in Latin America and the Caribbean over 1975–1991 and found that the flows were driven especially by Japanese political interests and to a lesser extent by economic interests as well. Interestingly, the trade factor lost its importance in the later sub-periods. The Japanese aid allocation also reflected the US interests: it supported the US economic interests, having left the US political interests unsupported. Also, Japan directed more aid toward poorer, more open and less populated countries in the re-

gion. The summary of main conclusions of these articles as well as methods they used provided in Appendix 1.

Data and Methods

The aim of the empirical part of our research is to find out what factors are significant determinants of territorial allocation of Japanese ODA in 156 developing countries over the period 1994–2014. We also want to compare our findings with the conclusions of studies mentioned in the previous section and find out whether the factors approximating Japanese interests in recipient countries (selfish motives), recipient countries' needs (altruistic motives) and the merit motives are significant determinants of Japanese aid allocation.

We define developing countries according to OECD DAC as countries that were eligible recipients of ODA in any time over the defined period (OECD, 2016a). We make use of panel data with cross-section element of 156 countries and time frame of 21 years. This potentially produces 3,276 data points (156 times 21) for each variable. However, as there are missing data for many variables, our models work with about 2,500 observations. In the first part of this section (3.1) we describe our dependent variable, explanatory variables, and data; then (3.2) we discuss the choice of the appropriate model.

Dependent variable, explanatory variables and data

The dependent variable is the volume of Japanese gross ODA in constant prices of 2014 (in millions USD) disbursed to individual countries as recorded by the statistical database OECD.Stat (OECD, 2016b). We work with the variable in a logarithmic transformation to reduce its skew and limit the risk of possible heteroskedasticity. We ignore the small amount of zero observations on the dependent variable (around 10%), having lost them because the logarithm of zero is not defined.

In accordance with the theory discussed above, we divide our independent variables into three groups. The first group contains variables approximating Japanese interests in a given developing country and variables reflecting relations between Japan and a given recipient (the selfish motives). The second group includes variables that represent the recipients' needs for aid, approximated by their economic and social characteristics (the altruistic motives). The third group of variables measures the factors of merit in Japanese aid allocations, that is, recipients' institutional quality and the level of political development.

The first group of variables includes a measure of Japanese export to each individual recipient country as a proportion on total Japanese GDP. Data were obtained from Comtrade database (United Nations, 2016). As these data are in USD at current prices, we use US GDP deflator (World Bank, 2016a) to recalculate them to constant prices of 2010. Then we divide the export variable at constant prices by Japanese GDP at constant prices of 2010 (World Bank, 2016a). To measure the trade interests differently, we also include a dummy variable indicating whether a particular recipient country is an oil exporter (UNCTAD, 2016). To account for Japanese geo-political interests as well as for a possible Asian bias in

Japanese aid allocation, we include a dummy variable indicating whether a recipient is an Asian country or not, based on the World Bank classification of countries (World Bank, 2016b), excluding Middle Eastern countries. We also work with a ‘non-capitalist’ dummy variable indicating whether a recipient country was a member, an associated member, an observer or closely cooperated with The Council for Mutual Economic Assistance (COMECON) before 1989 (Zwass, 1989). We hypothesize that the volume of Japanese aid allocation should increase with higher volumes of export and that it should be higher for countries that are oil exporters, for Asian countries and for non-members of COMECON. We also include total gross US aid flows to control for at least one *Gaiatsu* factor. By doing this we want to examine whether US aid allocation is a determining factor for Japanese aid allocation.

The second category of variables represents the recipients countries’ needs. We use recipient countries’ GDP per capita (in purchasing power parity, at constant international dollars of 2011; in natural logarithm) as an approximation of the economic needs. We also include the square of ln of GDP per capita to account for a possible income effect when aid is first increasing with recipients’ income up to a point and then decreasing. Data for GDP per capita variable were obtained from the World Bank (2016a). To approximate the social needs of recipient countries, we use mortality of children under five years of age (World Bank, 2016a). In this context, we hypothesise that higher social needs should lead to more aid. However, the empirical research shows that the social variables are often insignificant (for example Younas, 2008; Cooray et al., 2005). Because we use absolute aid allocations as our dependent variable, we have to control for the total size of recipient countries populations. We therefore include total population of recipients among the regressors and hypothesise that countries with larger populations receive larger absolute volumes of aid (*ceteris paribus*).

The third group of variables reflect the merit in Japanese aid allocation. It is assumed in this respect that donor countries reward better institutional and political performance of recipient countries by providing them more aid. This, in turn, should also lead to higher effectiveness of aid (Burnside and Dollar, 2000). We use the average of six Worldwide Governance Indicators (WGI) as the measure of institutional quality of recipient countries. We obtained the data from World Bank (2016c). We are also interested whether Japan rewards more democratic (or freer) countries by providing them with more aid. We measure the level of freedom and democracy by the Freedom in the World Index which is the average of two indices: index of political rights and index of civil liberties (Freedom House, 2016). In a similar manner, we want to find out whether Japanese aid allocation rewards better economic performance of recipient countries. Therefore we incorporate annual GDP growth of recipient countries (data from World Bank, 2016a) into our analysis. The variables used in our analysis are summarised in Fig. 1.

Code	Description	Unit	Source
ln_aid	Japanese Official Development Assistance (ODA) (to a given recipient country)	millions of USD, gross ODA disbursements, constant prices 2014	OECD (2016b)
gdp_pc (ln, L1)	GDP per capita (of recipient countries)	international dollars in purchasing power parity, constant prices 2011	World Bank (2016a)
ln_gdp_pc_2 (L1)	Square of the ln of gdp_pc	square of the ln of international dollars in purchasing power parity, constant prices 2011	World Bank (2016a)
u5mort (ln, L1)	Under-five mortality rate (of recipient countries)	deaths (of children younger than 5 years) per 1,000 live births	World Bank (2016a)
popul (ln, L1)	Total population (of recipient countries)	number of inhabitants	World Bank (2016a)
export_gdp_cp (ln, L1)	Japanese export (to a given recipient country) as a share on Japanese GDP	percentage (%): Japanese export to a country (USD, constant prices 2010)* as a share on Japanese GDP (USD, constant prices 2010)	United Nations (2016) World Bank (2016a)
freedom (L1)	Index of Freedom (of recipient countries)	index, average of two sub-indices: political rights and civil liberties, values from 1 (most free) to 7	Freedom House (2016)
avg_wgi (L1)	Worldwide Governance Indicators (WGI) (of recipient countries)	average of six sub-indicators, values from -2,5 (worst) to 2,5 (best)	World Bank (2016c)
us_oda1 (ln, L1)	Total US ODA (to a given recipient country)	USD, gross ODA disbursements, constant prices 2014 (<i>all values increased by 1 USD so that the log of the variable does not create many missing values</i>)	OECD (2016b)
gdp_growth (L1)	Annual GDP growth (of recipient countries)	percentage (%)	World Bank (2016a)
oilexp_cntry	Dummy variable for oil-exporting countries	equal to 1 if a recipient is an oil-exporting country, according to UNCTAD classification of coun-	UNCTAD (2016)
asia	Dummy variable for Asian countries	equal to 1 if a recipient is an Asian country (excl. MENA and Transcaucasian countries)	World Bank (2016b)
comecon	Dummy variable for non-socialist countries	equal to 1 if a recipient was a member, associate member, observer or cooperated with COME-	Zwass (1989)

Fig. 1 – Description of variables

Notes: The term ‘L1’ means that the variable used in regressions was lagged by one period (year) which holds true for all time-variant variables. The term ‘ln’ means that the variable entered regressions in a form of natural logarithm.

* In Comtrade database (United Nations, 2016), trade data are provided in current prices (in USD). Therefore, we use the US GDP deflator data with the base year of 2010 (World Bank, 2016a) to recalculate the trade data to constant USD prices of 2010.

Choice of an appropriate model

There are two broad categories of econometric methods that have been used to deal with the factors of aid allocation. The distinction between these two categories rests upon the treatment of zero aid allocations. If zero allocations are ignored, OLS methods or panel data techniques such as pooled OLS, random effects or fixed effects estimations could be used (see for example Alesina and Dollar, 2000). These methods may be employed when there are no zero allocations or when ignoring the zero allocations does not lead to a significant bias in estimations. On the other hand, when there is a substantial proportion of zero allocations, methods should be used that take this truncated nature of the dependent variable into account.¹

Because approximately only 10 per cent of our observations on the dependent variable are zeros, we have decided to employ the first category of models. This is in line with previous research as studies aimed exclusively at Japanese aid allocation (that is, those that did not work with any other donors) have employed solely the methods that ignore zero aid allocations. This is because Japan has provided aid to most of the developing countries that have been eligible to receive aid (see Appendix 1 for more details on the methods).

We work with panel data and assume that the unobserved heterogeneity exists which is also confirmed by the Breusch-Pagan Lagrangian Multiplier tests. This means that we are left with two panel data estimation techniques. The decision between them rests upon Hausman or Mundlak tests results. Because we work with heteroscedasticity robust standard errors we have to use the Mundlak test. In all instances, the Mundlak tests results clearly point to the fixed effects estimator.

However, using the fixed-effect estimator, it is impossible to estimate the effects of the time-invariant variables. Therefore, we have also employed pooled OLS with recipient countries’ and years’ fixed effects (that is, the least squares dummy variable approach) with standard errors clustered on recipients. Following Lundsgaarde et al. (2010), we lag all time-varying explanatory variables by one year to account for the aid decision-making sequence. So our final model, that contains factors of donors’ interests and recipients’ needs as well as factors of merit, can be written in the following way (t stands for time, i stands for a particular recipient, ε is the error term):

$$\begin{aligned} \ln_aid_{(i,t)} = & \alpha + \beta_1 \ln_gdp_pc_{(i,t-1)} + \beta_2 \ln_gdp_pc_2_{(i,t-1)} + \beta_3 \ln_u5mort_{(i,t-1)} + \beta_4 \ln_popul_{(i,t-1)} \\ & + \beta_5 \ln_export_gdp_cp_{(i,t-1)} + \beta_6 freedom_{(i,t-1)} + \beta_7 avg_wgi_{(i,t-1)} + \beta_8 \ln_us_oda1_{(i,t-1)} + \beta_9 \\ & oilexp_cntry_{(i)} + \beta_{10} asia_{(i)} + \beta_{11} comecon_{(i)} + \text{countries' fixed effects} + \text{years' fixed effects} + \varepsilon_{(i,t)} \end{aligned}$$

Results and discussion

Apart from the model specified above, we ran a variety of panel data fixed effects regressions and pooled OLS regressions (with recipient countries' and years' fixed effects and standard errors clustered around recipients) in which we used different explanatory variables and also alternated various indicators within particular groups of factors. The complete results of our four models (each performed by means of the above described two methods) are presented in Fig. 2.

Fig. 2 – Regression models and results

dependent variable: ln_aid								
Variables \ Models	(1.1) FE	(1.2) POLS + FE	(2.1) FE	(2.2) POLS + FE	(3.1) FE	(3.2) POLS + FE	(4.1) FE	(4.2) POLS + FE
L1.ln_gdp_pc	8.103*** (2.593)	7.257*** (2.729)	7.725*** (2.897)	7.003** (2.976)	8.318*** (2.902)	7.578** (2.971)	8.255*** (2.907)	7.478** (2.923)
L1.ln_gdp_pc_2	-0.490*** (0.140)	-0.435*** (0.147)	-0.478*** (0.155)	-0.427*** (0.159)	-0.515*** (0.158)	-0.462*** (0.162)	-0.511*** (0.159)	-0.455*** (0.163)
L1.ln_u5mort	0.263 (0.378)	-0.094 (0.447)	0.643 (0.438)	0.291 (0.479)	0.751* (0.444)	0.369 (0.472)	0.756* (0.449)	0.365 (0.477)
L1.ln_popul	2.250** (0.954)	3.007*** (1.109)	3.298*** (0.991)	4.122*** (1.108)	3.060*** (0.890)	3.989*** (1.053)	3.068*** (0.898)	4.013*** (1.063)
L1.ln_export_gdp_cp	0.334*** (0.101)	0.338*** (0.109)	0.199*** (0.072)	0.186** (0.080)	0.194*** (0.067)	0.170*** (0.071)	0.193*** (0.067)	0.168** (0.072)
L1.freedom			-0.209** (0.089)	-0.219** (0.091)	-0.173** (0.078)	-0.189** (0.081)	-0.172** (0.077)	-0.189** (0.081)
L1.avg_wgi			0.694** (0.303)	0.628** (0.309)	0.780** (0.299)	0.696** (0.304)	0.781** (0.300)	0.693** (0.305)
L1.ln_us_oda1					0.059** (0.026)	0.066** (0.028)	0.059** (0.026)	0.066** (0.028)
L1.gdp_growth							0.002 (0.005)	0.003 (0.004)
oilexp_cntry		-1.553*** (0.449)		-1.814*** (0.528)		-1.694*** (0.511)		-1.713*** (0.518)
asia		0.744 (0.919)		0.291 (0.854)		0.247 (0.819)		0.171 (0.835)
comecon		-5.677*** (2.151)		-6.890*** (2.012)		-6.627*** (1.840)		-6.637*** (1.853)
Constant	-62.404*** (16.795)	-66.148*** (17.457)	-78.154*** (19.573)	-83.198*** (20.212)	-77.479*** (18.991)	-84.426*** (19.693)	-77.413*** (19.040)	-84.434 (19.794)
B-P LM test	2842.3***		2366.3***		2342.4***		2330.5***	
Mundlak test	13.15**		27.75***		33.40***		33.74***	
Within R ²	0.1022		0.1243		0.1473		0.1473	
Between R ²	0.5153		0.5234		0.5318		0.5311	
Overall R ²	0.3891	0.7521	0.3957	0.7698	0.4035	0.7771	0.4028	0.7770
F test	8.69***	n/a	7.75***	n/a	6.50***	n/a	5.81***	n/a
Rho	0.9403		0.9719		0.9692		0.9693	
Observations	2621	2621	2373	2373	2373	2373	2369	2369
No. of groups	146		141		141		141	

Notes: Standard errors of the estimates are in parentheses. The level of significance: *** 1%; ** 5%; * 10%. The term ‘ln’ means that the variable entered regressions in logarithmic form. The term ‘L1’ means that the variable used in regressions was lagged by one year. The pooled OLS models were estimated with standard errors clustered on recipient countries. Recipient countries’ and years’ fixed effects are not presented. The FE models were estimated with robust standard errors.

In the first two models, only factors measuring recipients’ needs and donor’s interests were included. In the second set of models, we add institutional variables to control for factors of merit. The third pair of models contains additional extra variable to control for a *Gaiatsu* factor in Japanese aid allocation. The last couple of models incorporates GDP growth variable to account for an economic merit (that is, whether Japan rewards good economic dynamics of recipients in its allocation). The sets of variables that are employed in the analyses are the same for both regression methods. However, using the pooled OLS approach (in contrast to the FE approach) we are able to include the time-invariant variables (all of them are, by chance, dummy variables).

The regression results show strong stability throughout the models. The natural log of GDP per capita is always positive and significant (at least at 5 per cent significance level) as well as its square which is always negative and highly significant. In the presence of these two factors, natural log of under-five mortality is mostly positive but insignificant, except for the last two FE models in which it is marginally significant. Natural log of population is always positive and highly significant as well as the log of share of Japanese exports to recipient countries on Japanese GDP. Both institutional variables are always significant at 5 per cent level, each with the expected sign. The volume of US aid is positive and significant at 5 per cent whereas GDP growth is highly insignificant in both models it entered. Similarly, the time-invariant dummy variables yield the same results in each model: membership in former COMECON is negative and significant as well as belonging among oil exporting countries. On the other hand, the variable indicating whether a country is an Asian country is positive but insignificant.

So what do the results tell us? Firstly, they show that Japanese aid allocation *somehow* reflects the recipients’ needs since both of the variables related to the economic needs, that is, the natural log of GDP per capita and its square, are always significant. However, they also indicate that there is a clear middle income effect in Japanese aid allocation: when the natural log of recipients’ GDP per capita increases, the natural log of Japanese aid first increases and then it decreases. It means that there is an inverse U-shape in the relationship between income and Japanese allocation of aid, in other words, Japan has a tendency to support the middle income countries by providing them more aid (the turning points differ slightly among the different models, their values fluctuate around 3900 USD in PPP). This outcome corroborates the findings of Cooray et al. (2005) who detected similar income effect in Japanese aid allocation.

The results also imply that social needs of recipient countries do not play a role in Japanese aid allocation because the natural log of under-five mortality is almost always insignificant. It has to be born in mind, however, that in all regressions we control for (ln of) GDP per capita (and its square) and there is a high correlation between ln of GDP per capita and ln of under-five mortality (the correlation coefficient is -0.7918). We may therefore suspect these two factors to be highly collinear which actually may be the case: once we exclude the economic variables from the model, under-five mortality is highly significant and positive (aid has a tendency to flow to recipient countries with higher children mortality). Interestingly, if we replace (ln of) under-five mortality rate by (ln of) life expectancy at birth (World Bank, 2016a), the new variable is always insignificant (although negative), regardless of whether the economic variables are kept in the models or not (these regressions are not reported in the table above). This suggests that it actually matters which variable is used to measure the social needs of the recipient countries. The population size of recipients countries may be classified as a variable of recipients' needs as well because larger populations, *ceteris paribus*, need higher absolute amount of aid. The results clearly confirm such expectations: the coefficient of natural log of recipients' population is positive and highly significant.

Secondly, the results show that factors of Japan's interest are taken into consideration as well in relation to Japanese aid allocation. The export variable is positive and always significant at 1% level in all FE models and at least at 5 per cent level in POLS models. This confirms the theoretical findings that Japanese export is a significant determinant of Japanese aid allocation. The results are unchanged when trade is used instead of export. On the contrary, while we hypothesised that Japan fosters its interests by giving more aid to countries that are oil exporters, our POLS regressions show in all instances (at 1 per cent level of significance) that Japan actually gives more aid to countries that are not classified as oil exporting countries.² Our POLS regressions also show that Japan gives more aid to former non-socialist countries (approximated by their relation to COMECON). This reflects the fact that historical and political orientation of Japan still plays a role in present (or quite recent) Japanese aid allocation. On the other hand, geographical factors contradict our expectations and a theory: it seems, that after controlling for all other factors (see Fig. 2), there is no statistically significant Asian effect in Japanese aid allocation (the *asia* variable is always positive, yet insignificant). This conclusion holds even when the *asia* variable is replaced by geographical distance (Mayer and Zignago, 2011) which is also insignificant.

Additionally, we employ one *Gaiatsu* factor that also reflects to some extent Japan's (political) interest: the amount of US official development aid provided on a bilateral basis to recipient countries. The results show that the volumes of US ODA are a positive and statistically significant (at 5 per cent level) determinant for Japanese aid allocation. In other words, the higher is the US ODA to recipient countries, the higher is the Japanese aid allocation. Overall, it is possible to conclude that the factors of donor's interests are signifi-

cant in Japanese aid allocation, however not so convincingly as it is suggested by some of the previously published papers.

Thirdly, the results show that factors of merit are significant in Japanese aid allocation and that Japan tends to reward countries with better institutional quality and countries that are freer and more democratic. The *freedom* variable (the Freedom in the World index) is negative and significant (at 5 per cent level) in all specifications it enters which means that with a lower value of this variable (that is, with higher level of political and civil freedom) higher aid allocations are associated. Similarly, the institutional quality variable (*avg_wgi*, the average over six dimensions of the Worldwide Governance Indicators) is always significant (at 5 per cent level) and positive which indicates that higher aid allocation is associated with better institutional quality. On the other hand, it seems that Japan does not reward countries that grow faster by means of higher amounts of aid: although the variable measuring GDP growth is positive (that is, with higher GDP growth higher aid allocation is associated), it is clearly insignificant.

Finally, we focused in our analysis on the most recent decade in our dataset (2004–2014) since this period has not been investigated in any of the studies discussed in section 2. We performed the same regression analyses and found out that most of our results hold although the significance of almost all variables drops.³ Few of them actually become slightly insignificant in some of the models: the WGI variable, the US aid variable and the oil-exporters dummy. The only variable for which the drop of significance is more dramatic is the export variable that is now clearly insignificant (p-value well below one in almost all models). While it is tempting to interpret this in a way that the export interests have no longer played a role in the Japanese aid allocation in the most recent period, it must be born in mind that lower p-values of almost all variables may be a consequence of a lower number of observations. To examine this, we extended the period to 2000–2014 and then repeated the analysis again. We get almost the same results as for the entire period, with one exception: in most of the models (except for the first one), the export variable remains insignificant. Therefore, the significance of the export variable may have been decreasing in the recent period.

Conclusions

In this paper we have analysed the factors that affected territorial allocation of Japanese aid over the last two decades. Although there are more than ten empirical studies on factors of Japanese aid allocation, there is not a clear consensus on the role of some of the factors. The value added of our study is that it provides (a) a review of (to our knowledge) all available studies in terms of the methods and results and (b) a set of regression analyses over recent and relatively long period (1994–2014).

We have reviewed 12 studies using regression analysis on the factors of Japanese aid allocation. The methodologies of the studies differ in many aspects, such as in the time period, set of recipients, donors and determinants, and in the methods employed. While the stud-

ies are not directly comparable, it may also be argued that conclusions that survive such divergent conditions are in effect robust.

Generally speaking, most of the studies have found all major groups of factors (that is, some of their variables) to be significant determinants of Japanese aid allocation. However, substantial differences have been identified in the primacy of the factors. Most studies found Japan to be rather a selfish donor whose aid allocation is driven by the donor's interests. Factors of political and/or economic interests were either key or non-negligible drivers of aid allocation in 10 out of 11 studies that examined these factors (one study did not); the factor most often confirmed was export/trade. Only one of these studies has found no support for economic interests (Tuman et al., 2009). However, there are also studies that stress the importance of the recipients' needs factors in Japanese aid allocation. These are mainly those studies that focus solely on Japan; this conclusion also tends to hold rather in the more recent period. Those studies that employed *Gaiatsu* hypothesis (the importance of US security and economic interests as a specific factor in Japanese aid allocation) have found some support for it.

The empirical part of the paper aimed to identify significant determinants of territorial allocation of Japanese ODA in 156 developing countries over the period 1994–2014. As relatively small share of observations on the dependent variable are zero allocations, we performed a variety of panel data fixed effects regressions and pooled OLS regressions (with recipient countries' and years' fixed effects and standard errors clustered around recipients) in which we used different explanatory variables and also alternated various indicators within particular groups of factors. The regression results show strong stability throughout the models, indicating the robustness of the conclusions.

Our results confirm significance of some variables from each of the three groups of factors. Overall, they are in line with the "average" results of previous studies but deviate in some aspects. We confirmed some role for Japan's interests in its aid allocation, but relatively lower than found in previous studies. We examined two variables of economic interests: our analysis confirms the significance of export/trade as found in most of the previous studies, but we have not found support for the "oil hypothesis" (actually the opposite was found – Japan gives more aid to countries that are not classified as oil exporting countries). While export/trade variable may be a more direct proxy for economic interests and interdependence, we also note that its significance has diminished in the more recent period. Contrary to other studies, we have found little support for Asian bias in aid allocation, neither for geographic distance. Japan therefore does not seem to use aid for strengthening its position in the region. The preference for non-socialist countries is a reflection of historical Cold War division, rather than being driven by current political interests. On the other hand, our results show that Japan tends to give (more) aid to countries that are recipients of US aid. This supports the *Gaiatsu* hypothesis, but it also reflects Japanese political interests.

In line with most other studies we found only moderate support for recipient countries' needs. Our results show that the level of economic development influences Japanese aid allocation, but in non-linear fashion. There is an inverse U-shape relationship between income and aid – below a certain threshold Japan prefers richer rather than poorer countries, but this pattern reverses above the threshold. This corroborates the findings of Cooray et al. (2005). The interpretation of whether this reflects the “needs hypothesis” is not clear. Japan tends to support neither the poorest nor the richest developing countries. While the threshold found in the models (cca 3,900 PPP USD) is not very high, it is neither so low that we could ignore the fact that below the threshold Japanese aid allocation is anti-poverty oriented. The level of social development is not a significant factor once we control for the level of economic development (GDP per capita). The last variable reflecting recipients' needs – population size – is always positive and highly significant factor as expected.

The factors measuring governance, democracy and freedom are all significant determinants – Japan tends to reward countries that have better governance and higher level of freedom and democracy. If these institutional factors increase the effectiveness of aid, Japanese aid allocation can be viewed positively. On the other hand, the dynamics of economic growth is not a significant factor – Japan does not reward countries growing faster with more aid.

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Appendix 1 – Summary of studies and methods used to analyse the factors of Japanese aid allocation

Study	Donor; Recipients; Period; Dependent Variable	Method	Conclusion with regard to factors of Japanese aid allocation
Katada (1997)	Japan 19 recipients in Latin America and the Caribbean 1975–1991	weighted least squares (WLS)	political interests as the main determinant; economic interests important to a lesser extent; support to <i>Gaïatsu</i> hypothesis (to both US economic and security interests);
Schraeder et al. (1998)	4 donors including Japan 36 recipients in Africa 1980–1989 total aid disbursement as % of the recipient	generalised least squares, error components (GLSE)	economic self-interest as the key determinant; lower support also for the recipients' needs hypothesis
Alesina, Dollar (2000)	21 donors including Japan 180 recipients 1970–1994 five-year averages of total amount of aid disbursement	pooled OLS random-effects tobit model two-stage least squares (2SLS)	political interests as the main determinant (former colonies, UN votes); low support for the recipients' needs hypothesis (one of the lowest elasticity to recipients' incomes); aid not rewarding good policies nor institutions of recipients;
Berthélemy & Tichit (2004)	22 donors including Japan 137 recipients 1980–1999	random-effects tobit model	economic interests as the most important single determinant (trade and investments)
Tuman & Ayoub (2004)	Japan 35 recipients in Africa 1979–1998 net total aid disbursement	pooled OLS with panel-corrected standard errors	recipients' needs as the main determinants (poverty, food insecurity); aid rewarding a greater respect for human rights; only partial support to economic interests' hypothesis; partial support to <i>Gaïatsu</i> hypothesis (to US security interests)
Cooray et al. (2005)	Japan 96 recipients 1981–2001	pooled OLS fixed-effects model	both national interests and recipients' needs hypotheses supported; income, population and Asian bias in Japanese aid allocation
Canavire et al. (2005)	9 donors including Japan full sample of recipients and IDA eligible countries 1999, 2000, 2001, 2002 (cross-sectional data)	tobit model (cross-sectional)	Japanese aid driven by selfish, export-related motivations, and is weakly poverty and policy oriented.

Berthélemy (2006)	22 donors including Japan 137 recipients 1980–1999 total amount of aid commitment per capita	heckman model two-part model (probit + linear)	japan as a “moderately egoistic” donor (national interests’ hypothesis relevant); japan as an “egoistic” donor when Asian dummy dropped (very large support for the national interests’ hypothesis)
Angeles et al. (2008)	7 donors including Japan 104 recipient countries 1984–2003 (special focus on post-1998 period) total gross ODA	fixed-effects model pooled OLS tobit random-effects model	national interests’ hypothesis as the key determinant over 1984–2003; recipients’ needs hypothesis much more relevant after 1998 than before;
Younas (2008)	22 donors including Japan 78 net aid recipients 1991–2003 real (net) aid per capita from a specific donor	pooled OLS	recipients’ imports of Japanese machinery and transportation equipment as the key determinant; population bias in Japanese aid allocation (small countries get more aid);
Tuman et al. (2009)	Japan 86 recipients 1979–2002 real net Japanese aid to recipients’ real GDP (%)	pooled OLS with fixed-effects dummy variables (LSDV) and panel-corrected standard errors	recipients’ needs hypothesis as the main determinant; <i>Gaitsu</i> hypothesis only partially supported; no support to economic interests hypothesis (Japanese economic interests had opposite effects than expected);
Harrigan & Wang (2011)	7 donors including Japan 153 recipient countries 1966–2008 aid commitment of a donor divided by a recipient’s population (%)	pooled OLS with fixed-effects dummy variable (LSDV) probit random-effects model tobit random-effects model	recipients’ needs hypothesis not supported in pooled OLS framework; recipients’ needs hypothesis strongly supported in the tobit model framework; large Asian bias

Source: Created by authors, based on studies cited in the first column.

Notes

¹ These are the two step procedures (probit or logit estimations in the first step combined with OLS or panel data estimations on non-zero allocations in the second step, see for example Barthel er al., 2013 or Berthélemy, 2006), heckman methods (for example Lundsgaarde et al., 2010 or Berthélemy, 2006) or tobit regressions (for example Dreher et al., 2009; Canavire et al., 2005 or Opršal et al., 2017).

² It could be nevertheless stressed, that such an approximation by a dummy variable may be too crude: a more precise measurement (such as for example a share of oil exports on total exports or on GDP of a particular country) could modify such conclusion.

³ Asia dummy is the only variable whose significance actually increases. In the first model it is significant at 10% level while in the rest of the models it is narrowly insignificant.

Youth Perception of Agriculture and potential for employment in the context of rural development in Bhutan

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Abstract

Agriculture forms the backbone of economy of many countries particularly developing countries around the world and Bhutan is not an exception. In Bhutan, agriculture provides employment and livelihoods to more than half of the total population. However, the contribution of agriculture to Gross Domestic Product has been decreasing over the years and there are several reasons affecting agricultural productivity. One of the reasons is cited is the decreasing labour force in the agriculture sector. Bhutanese farming comprises of relatively less mechanized farming so youths are considered as the mainstay of agriculture farming but over the last decade or so, it is observed that more and more youths are migrating to urban areas and as a result decreasing the labour force in rural areas. It is not clear why youths are not interested in taking up agriculture related employment despite increasing rate of unemployment in Bhutan. The objective of this paper is to document the perception and knowledge of youth towards agriculture and to analyze the factors affecting youth's perception of agriculture related employment. The data were collected from the selected youth ranging from 13 to 24 years from east, west, central and southern part of the country. The respondents included school students, school drop outs, and unemployed youth and undergraduate students from selected colleges under the Royal University of Bhutan. Respondents also included teachers and farmers. The research reveals that young students in high school who hail from rural areas and with farmer parents perceive that agriculture can be a potential area for employment. However, the principal components analysis reveal that some of the factors affecting youth not taking up agriculture related employment are crop loss, lack of resource, parents pressure, relatively less access to technical and financial support. Youth suggests that with adequate technical and financial support profitable and sustainable farming can be made attracting youth entrepreneurs. Retaining and encouraging youths to promote agriculture in rural areas can substantially enhance food security in Bhutan. Therefore, this paper aims to provide the ways on how youth can be attracted and engaged in-agriculture sector and its implications to food security of Bhutan.

Key words: Agriculture, Bhutan, Employment, Knowledge, Perception, Rural Development, Youth.

Introduction

Agriculture forms the backbone of the economy of many of the countries around the world particularly the developing countries. It provides employment and livelihoods to significant number of people both as a formal and informal sector. Agriculture, particularly in developing countries depends on its people and how capable they are and the extent of labour they could provide (Raymond et al., 2004). Therefore, the youths are crucial for advancing the agriculture sector particularly in the developing countries as they form the most productive group in the overall population structure. This can be further capitalized upon by engaging the youth and motivating them to join this sector. In Bhutan, over 60% of the total population depends on agriculture for their livelihoods (Katwal, 2013; RGOB, 2014b; Katwal et al., 2015) and youth, who are within the age range of 15 to 24 years, comprises 19.3% of the total population (RGOB, 2012a; Dorji, 2015). However, the number of people particularly youth in the rural area is decreasing over the years due to rural to urban migration (Tobgay, 2005b; Chua, 2008). In 2011 alone, over 0.6% of the total population comprising youths migrated from rural to urban areas (RGOB, 2012b; Tenzin, 2012). The rural to urban migration such as this is leading to shrinking of productive labour force in the rural areas ultimately affecting agricultural productivity (Tenzin, 2012; UNICEF, 2016). However, the factors affecting agricultural productivity and its promotion as a potential area for youth employment in Bhutan is not clear.

In Bhutan, agriculture sector contributes significantly to national revenue though its contribution to GDP has been decreasing, for instance it was 26.8% of the total GDP in 2000, 17.7% in 2011 and 16.8% in 2014 (RGOB, 2012a; RGOB, 2013; Katwal, 2013; RGOB, 2015b). Bhutan has a population of over 781,600 and with a GDP, as of October 2016, of US\$ 2,580 (RGOB, 2016a). The youth unemployment rate has been 7.3%, 9.6%, and 9.4% in 2012, 2013 and 2014 respectively (RGOB, 2014a). The migration of youth from rural to urban areas is resulting in increasing youth unemployment and food insecurity (Tenzin, 2012). Agriculture can provide significant employment in Bhutan although the specific strategies that can motivate needs to be clearly understood.

Currently despite having more than 60% of the total population of Bhutan engaged in farming, yet food self-sufficiency at household level has not been achieved. Therefore, more than 85% of the rice requirement for Bhutan is met by from the neighboring country India. It is due to three main reasons: small holder subsistence farming in the marginal lands, migration of youth from rural to urban areas and depredation of crops by wild-life species. The total arable land in Bhutan is about 2.8% of which about 14% of the arable land is smaller than average land holding in South Asia.

In order to encourage farmers and ensure food security and ultimately rural development, the Royal Government of Bhutan (RGOB) designed its policies and one of the strategies is declaration of Bhutan's intention, was announced in 2003, to become world's first organic country by the year 2020 (RGOB, 2007; RGOB, 2011). Although the policy towards

increasing agricultural output has been reviewed, revised and potential challenges identified (Tobgay, 2005b; Duba et al. 2008; Ghimiray, 2013; Nuehoff et al, 2014) yet the anticipated impacts and retention of youth in rural areas and their engagement in agriculture sector are yet to be materialized. Ministry of Education (MOE) also started School Agricultural Program (SAP) in the year 2000 for students of class nine to twelve and the main intention of SAP programme was to educate youth on dignity of labour, importance of agriculture to food security and to motivate youth towards employment in agriculture (RGOB, 2013) but how some of the strategies such as this have been effective is not yet understood. Therefore, the objective of this paper is to document and analyze the perception of the youth towards agriculture in Bhutan. It is expected that this research would help policy makers and researchers develop strategy on how the youths can be engaged in agriculture leading to youth employment, agri-preneurship development and ultimately food security in Bhutan.

Methods

The research study makes use of stratified sampling method (Kothari, 2004). The sample of respondents comprises of class nine to twelve students from the selected schools of four regions in Bhutan including final year undergraduate students from selected colleges of Bhutan. The sample also included school dropouts and unemployed youths (Table 1). The four regions in Bhutan include Thimphu and Punakha in the west, Trongsa and Bumthang in central, Trashigang and Mongar in the east and Samtse and Chukha in the south of Bhutan. From each region, two districts were selected one close to administrative centre and the other located far away from the administrative centre which is categorized as urban and rural respectively. From each district, the youths are stratified into (1) Middle and High Secondary Schools, (2) School Dropouts, (3) Tertiary institutions and (4) Unemployed youths. The students in higher secondary schools were further stratified by taking the streams like (Humanities, Commerce, Sciences and General) to compare with college students. The students in tertiary institutions was also further stratified by taking the courses like Bachelor of Arts (BA) [B.A. in Development Economics and B.A. in Economics], Bachelor in Business Administration (BBA), Bachelor of Commerce (B.Com), and Bachelor of Science in Sustainable Development (B.Sc. SD) to compare the perception with school youths. Other respondents including school dropouts and unemployed youth were interviewed using convenience and opportunistic sampling method. Another respondent group comprising of the farmers, the school principals, and school agricultural teachers were also interviewed to measure their perception about agriculture related employment career for the youth in Bhutan.

A total of 396 students were selected which is higher than the required sample of 384. The

sample size determination followed the equation: $n(p) = \frac{z^2 * p * q}{c^2}$; $n(p) = \frac{(1.96)^2 * (0.5) * (1-0.5)}{(0.05)^2} =$

384.16 or = 384, where, n is the sample size, z^2 is Z value (1.96 for 95% confidence level),

p is the percentage picking a choice, expressed as decimal, c is the confidence interval, expressed as decimal, and q is $1-p$. Therefore, the total sample size for the survey is 500 and out of which 232 youths (class nine to twelve), 30 School dropouts, 84 College students, 50 Unemployed youths, 72 farmers, 14 Principals and 18 School Agriculture Teachers were interviewed. Several key informant interviews were also done for data triangulation.

Survey questionnaire pertaining to whether or not youths know what agriculture is and whether they have knowledge about agriculture were asked. While doing so, the questionnaires were designed based on the 5-point Likert scales such as: (1) Strongly Agree, 2)

Table 1. Sample size and sample characteristics (N=396)

Variables	No. of respondents (%)
Age	
Younger Youth (13-18)	211 (53.3)
Older Youth (19-24)	185 (46.7)
Gender	
Male	200 (50.5)
Female	196 (49.5)
Qualification Level	
School Students (MSS & HSS)	232 (58.6)
College Students	84 (21.2)
School dropouts	30 (7.6)
Unemployed Youths	50 (12.6)
Area (Locality)	
Rural	188 (47.5)
Urban	208 (52.5)
Regions	
East	92 (23.2)
West	146 (36.9)
South	108 (27.3)
Central	50 (12.6)
Family Background	
Agriculture Background	181 (45.7)
Non-Agriculture Background	215 (54.3)

Agree, 3) Neutral, 4) Disagree and 5) strongly Disagree used by Likert (1932). The final questionnaires were pretested to maintain consistency and reduce ambiguity. The data were collected from May 2016 to July 2016. The questions included items to measure knowledge and perception of youth on agriculture and the factors affecting the potential of agriculture as employment for youth. Factors considered in this research are broadly classified as ecological, economic and social. Ecological factors are related to geography, location and climate while farmers' access to market, labour and land are categorized as economic. The perception of youths' parents, teachers and relatives are categorized as so-

cial factors. The responses from the 5-Likert scale data were used for Principal Component Analysis (PCA). PCA analysis was performed to extract the number of factors associated to youth employment in agriculture. The appropriateness of the data for factor analysis was evaluated using Bartlett's Test of Sphericity and to verify and support the results of the factorial solution scree test was also performed (Table 3). The PCA was performed with orthogonal rotation (varimax) and the Kaiser–Meyer–Olkin (KMO) measure verified the sampling adequacy for the analysis, KMO = .83 which can be accepted for further analysis where all KMO values for individual items were > .68, showing well above the acceptable limit of .5 (Field, 2009). Bartlett's test of sphericity $\chi^2 (351) = 3559.18, p < .001$, indicating that correlations between items were sufficiently large for PCA. An initial analysis was run to obtain eigenvalues for each component in the data. Seven components had eigenvalues over Kaiser's criterion of 1 and in combination explained 60.58% of the variance.

In order to determine the significant factors affecting the perception of youth on agriculture related employment opportunity in Bhutan, linear regression model and Ordinary Least Square (OLS) method as mentioned in Equation (1).

$$\hat{y}_i = a + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + \beta_7 x_7 + e \text{ ----- (1)}$$

Where,

\hat{y}_i - is dependent variable that indicates the measure of the youth's perception of agriculture related job,

x_i - is explanatory variables,

a & β - are regression coefficients

e - Stochastic error terms.

The factor affecting perception of youth on agriculture = $a + \beta_1$ (Crop Loss) + β_2 (Resources Constraints) + β_3 (Threats) + β_4 (Lack of Resources) + β_5 (Lack of Accessibility) + β_6 (Peer Pressure) + β_7 (Parents Pressure) + e ----- (2)

The youth's perception of agriculture related jobs = $1.971 + 0.074$ (Crop Loss) + 0.009 (Farming Constraints) + 0.007 (Threats) - 0.132 (Lack of Resources) - 0.005 (Lack of Accessibility) - 0.005 (Peer Pressure) - 0.082 (Parents Pressure) + e ----- (3). A summary of youths' attitude, knowledge and perception with thematic questions is presented in Table.2.

A Cronbach's alpha higher than 0.70 indicates high value in reliability and in this study reliability levels are higher than 0.70.

Results and Discussion

Higher proportion of youth and those living in rural area agree that agriculture could be opportunity for employment (Table 2). Analysis show that youth who had experience or

exposure to farm are likely to accept that agriculture can be an opportunity for employment in Bhutan. This is consistent with the report on students' perception by Ejembi, (1988) in Nigeria. Similarly, youth who have been living in the rural areas held positive perception towards agriculture as in Nigeria and Tanzania (Nnadi et al, 2008 cited by Kimaro et al, 2015; Vera-Tascona et al, 2008; Adesina et al, 2016). However, the result reported from Nigeria and Tanzania associated to contract farming (D'Silva et al., 2009; Ovwigho and Ifie, 2009; Aphunu and Akpobasa, 2010) where in case of Bhutan farmers are small holders. In such a case the comparison between Bhutan and countries like Nigeria and Tanzania may not be relevant due to conceptual and geographical difference but one of the reasons for getting low agriculture productivity due to lack of - infrastructure, access to market and technology matches with the Bhutanese situation. In Bhutan use of modern technology for farming, market access and infrastructure is limited primarily due to mountainous terrain.

The result reveal that youth who are studying in school show relatively more knowledge and held positive perception towards agriculture and employment opportunities than those in colleges and those who are unemployed. Higher proportions of youth and with higher qualification disagree that agriculture can be considered for employment (Table 2). This could be because higher qualifications means higher expectation from parents and relatives as reported by Mc Larty (2005) and Hassan et al. (2009) cited by D'Silva et al. (2009). The farming in Bhutan is practised following traditional methods for which the skills can be achieved by practicing year after year and sometimes it is transferred from one generation to the other and this also mean modern education system has little influence on how the farming system in the mountainous environment could be practical and sustainable (Gurung 2015). Akiko, (2016) argue that modern school education system has alienated the younger generation from rural farming life; rather it is causing rural out-migration. It is not clear how the modern education system failed to motivate younger generations but it seems that the youth completing college degree tend to migrate to towns and cities for employment and preferring jobs in urban areas and not in cities (Kimaro et al., 2015). It could be argued that the current education system in Bhutan do not offer the diverse knowledge and skills and mainly every parents want their child to work in the civil service. Chi square test also reveal that there is significant difference between the variables such as age ($\chi^2 = 58.576$, $p < .001$), qualification ($\chi^2 = 88.746$, $p < .001$) with regard to knowledge on agriculture and age ($\chi^2 = 26.696$, $p < .001$), qualification ($\chi^2 = 33.975$, $p < .001$) and region ($\chi^2 = 14.655$, $p < .05$) with regard to perception on rural development. This result is consistent with the findings of Nnadi and Akwizu (2008); D'Silva et al. (2010) and Abdullah and Sulaiman (2013).

Relatively lesser proportion of youth in eastern Bhutan agrees that agriculture could be potential for employment and rural development. This is because farmers grow their own foods and the only potential buyers are the people living in the urban areas and in addition, the agricultural products are basically season bound. This means during summer

months, there would be too many vegetable sellers while during winter months there would be too less or no availability of vegetables. Such situation creates uncertainty and fluctuation of market prices (Table 2). The result showing youth hailing from south of Bhutan tend to perceive agriculture could be due to the better access to market and better vegetable productivity. Southern Bhutan is located in the sub-tropical zones where winter is warm and summer is relatively hot and humid and it relatively a better place for agriculture farming.

Factors affecting youth perception of agriculture

PCA analyses show that the items that cluster on the same components were grouped in same thematic group. The thematic groups are categorized into the seven groups based on **Table 2: Summary of responses of youth**

	Agree (%)	Neutral (%)	Disagree (%)
<i>I am willing and acceptable for me to get employed and seek opportunities related to agriculture (Attitude).</i>			
Rural	118 (58.2)	38 (19.1)	33 (22.7)
Urban	130 (57.8)	41 (19.1)	38 (23.0)
School students	149 (64.2)	36 (15.7)	47 (20.1)
College Students	40 (48.2)	22 (26.2)	22 (25.6)
Unemployed Youths	80 (50.3)	17 (21.5)	23 (28.3)
Male	114 (56.9)	40 (19.9)	46 (23.2)
Female	116 (59.1)	36 (18.3)	44 (22.6)
Younger Youth	135 (64.4)	33 (15.5)	43 (20.3)
Older Youth	99 (53.6)	40 (21.5)	46 (25.1)
East	50 (53.6)	20 (22.2)	22 (24.3)
West	83 (57.2)	28 (18.9)	35 (23.9)
South	61 (56.9)	23 (21.1)	24 (22.0)
Central	35 (70.4)	5 (10.3)	10 (19.3)
Agriculture Background	109 (60.0)	32 (17.8)	40 (22.2)
Non-Agriculture Background	121 (56.3)	43 (20.2)	51 (23.5)
<i>Agriculture involves crop farming, livestock rearing and provides opportunity to put the local produce to global market (Knowledge).</i>			
Rural	116 (61.7)	45 (23.9)	27 (14.4)
Urban	116 (56.0)	55 (26.3)	37 (17.7)
School students	161 (69.5)	54 (23.3)	17 (7.10)
College Students	35 (41.5)	30 (35.5)	19 (23.0)
Unemployed Youths	36 (44.9)	16 (20.0)	28 (35.2)
Male	122 (61.2)	49 (24.5)	29 (14.3)
Female	110 (56.2)	51 (25.8)	35 (18.0)
Younger Youth	141 (66.9)	54 (25.6)	16 (7.5)
Older Youth	91 (49.3)	46 (24.6)	48 (26.0)
East	54 (53.6)	18 (22.2)	20 (24.3)
West	77 (57.2)	42 (18.9)	27 (23.9)
South	63 (56.9)	32 (21.1)	13 (22.0)
Central	40 (70.4)	6 (10.3)	4 (19.3)

Agriculture Background	117 (64.9)	40 (22.0)	24 (13.1)
Non-Agriculture Background	115 (53.2)	60 (27.9)	40 (18.7)
<i>Do you think agriculture farming would contribute to rural development? (Perception.</i>			
Rural	96 (51.1)	53 (28.0)	39 (20.9)
Urban	95 (45.9)	64 (30.8)	49 (23.4)
School students	125 (54.0)	64 (27.7)	43 (18.3)
College Students	31 (37.3)	31 (36.8)	22 (26.6)
Unemployed Youths	35 (43.5)	22 (27.6)	23 (29.0)
Male	97 (48.6)	60 (29.9)	43 (21.5)
Female	94 (48.1)	57 (29.1)	45 (22.9)
Younger Youth	113 (53.4)	61 (28.8)	37 (17.8)
Older Youth	79 (42.5)	56 (30.2)	50 (27.2)
East	43 (46.6)	26 (28.2)	23 (25.2)
West	67 (46.0)	44 (30.0)	35 (24.0)
South	53 (48.7)	35 (32.0)	20 (19.1)
Central	29 (57.5)	12 (24.9)	9 (17.5)
Agriculture Background	93 (51.0)	51 (28.4)	37 (20.7)
Non-Agriculture Background	100 (46.3)	65 (30.3)	50 (23.4)

the complements. The component 1 is categorised as “*crop loss*”, component 2 “*Farming constraints*”, component 3 “*threats to crop*”, component 4 “*lack of resources*”, component 5 “*lack of accessibility*”, component 6: “*peer pressure*”, and component 7 “*parents pressure*” (Table 3). The seven components clustered are further categorized into ecological, economics and social factors. Ecological Factors (Factor 1: *Crop loss*; Factor 2: *Farming constraints*; Factor 3: *Threats*), Economic Factors (Factor 4: *Lack of resources*; Factor 5: *Lack of accessibility*), Social Factors (Factor 6: *Peer Pressure*; Factor 7: *Parents pressure*).

Ecological factor: comprises of crop loss, farming constraints and threat to crops. Crop loss is a crucial problem in rural Bhutan and is mainly related to the abundant forest cover which usually provides a good habitat for diverse wildlife species. Each year farmers experience significant crop losses as a result of resources constraints like disease and pest infestation and also wildlife threats in India, Nepal and Bhutan. Crops are widely damaged by wild animals every year in part of India, Nepal and Bhutan, and this problem is one of the factors behind more and more farmers giving up farming leading to increasing-

Table 3: PCA result of factors affecting youth perception of agriculture (N = 396).

Factors that affect youth to engaged in agriculture	Component*						
	1	2	3	4	5	6	7
Reduction in yield due to poor harvests.	.74	.03	.09	-.05	.01	.07	-.08
Reduction in yield due to poor soil quality.	.72	.07	.09	.01	.12	.00	-.07
Reduction in yield due to soil degradation.	.72	.14	-.02	.02	.15	-.06	.07
Reduction in yield due to irregular rainfall.	.72	.10	-.04	.08	.03	.08	.23
Reduction in yield due to unsuitable climatic conditions.	.66	.13	.08	-.02	-.08	-.04	.08
Reduction in yield due to poor irrigation facilities.	.54	.31	.15	-.11	.13	.03	.35

Parents face wildlife threat.	.02	.78	.05	-.15	.05	-.02	.05
Crops affected by pests and disease.	.32	.68	.09	.03	.07	.09	.17
Inadequate land at village.	-.04	.08	.83	.14	-.05	.33	-.16
Water shortage in the village.	-.11	.00	.72	.17	.01	.40	.15
Unaffordable of high-quality farming inputs.	.01	.13	.07	.81	.02	.07	.04
Unaffordable of high-cost technologies for farming.	.16	-.03	-.05	.80	.09	.00	.05
Unaffordable of high-quality seeds.	.19	-.07	-.12	.75	.10	.05	-.05
Can't start agri-business without income.	-.03	.29	.26	.58	.03	-.06	.10
Lack of proper marketplace to sell farm products.	.25	.05	-.12	.58	.36	.13	-.06
Financial problem at home.	.21	-.17	.43	.48	.12	-.05	.05
Can't apply for an agricultural loan due poor family background.	.24	-.42	.26	.43	.24	-.02	.06
Lack of micro-bank facilities in village.	.00	-.01	.04	.15	.85	.01	.03
Lack of credit facilities in the village.	.14	.05	.06	.18	.81	.03	-.05
If I work as a farmer my friends will down look.	.06	-.03	-.01	.06	-.03	.86	.21
My friends consider farming as low dignity job.	.05	-.01	-.02	.11	.02	.85	.09
People will look down if I take farming as a career in future.	.05	-.08	-.02	.01	.02	.80	.21
My friends will consider me successful if I do dignified.	.04	.22	.04	-.07	.07	.65	.18
My parents don't want me to take agriculture as my career in future.	-.02	-.10	-.07	.04	-.06	.26	.77
My parents would not like me to do the farming.	-.04	.11	.06	.04	.03	.28	.77
My parents want me to become an Engineer/Doctors but not a farmer.	.07	.11	-.06	.01	.08	.06	.77
My parents tell me that farming is a bad profession.	.11	-.33	.04	.00	-.18	.28	.57
Eigenvalues	5.37	3.55	2.32	1.57	1.28	1.16	1.11
% of Variances	19.8	13.1	8.58	5.82	4.73	4.29	4.11
	9	6					
A	19.8	33.0	41.6	47.4	52.1	56.4	60.5
	9	5	3	5	8	7	8

farmland being laid fallow. More wildlife species such as wild pig, deer, black bear, porcupine and monkeys mean increase in labour to guard crops. This is relatively difficult as people living in the rural areas usually are not privileged to take enough rest as monkeys destroy crops during day time and other wild animals so depredate crops during the nights. Similarly, farming in marginal lands (2.8% of the total land area is arable in Bhutan) is not profitable which usually results in higher input to farming than the crop yield. This is mainly related to the farming on lands that are usually steeper than 35 degrees. In addition increasing water shortage is a serious threat arising from climate change which will unfavourably affect crop production due to loss of soil fertility and result into erosion

of topsoil, loss of cultivable lands, outbreak of pests, diseases and increased damages to crops by wildlife. This issue is becoming common in Asia in general but is relatively more crucial in Bhutan than India and Nepal in particular (Tobgay, 2005b; Armstrong et al., 2009). On the other hand, the mountainous terrain of Bhutan limits the use of modern technology even if the farmers can afford to use those technologies.

In Bhutan, 13.6% of the agricultural land holding is relatively small than other developing countries and about 60.4% of the agricultural land in India, 28.7% in Nepal and 59.0% in Bangladesh (World Bank, 2011a; World Bank, 2011b) and farmer's practice subsistence farming where it is seasonal in many part of the country.

Economic factors: comprises of lack of resources and accessibility. The two components are somehow related to other factors such as crop loss which lead to the lack of resources for farmers. Most of the farmers in Bhutan are subsistence farmers and they do not have capacity to buy and use modern technology. In addition, most of the farmers are relatively poor and they are not able to provide mortgages collateral for obtaining loans from the banks. The crops grown in marginal lands are mostly depredated by wildlife species and for such losses farmers do not get compensation as there is no such mechanism to support farmers. Crop loss is significant in Bhutan, for instance, 17% of the average annual household cash income. Although the crop loss to wildlife in Bhutan is lower than figures reported elsewhere such as 38% in Nepal; and 45% in Tsarap Valley of India but significant crop loss is unaccounted as farmers do not report due to absence of compensation to them (Wang and Macdonald, 2006; Deshar, 2013). Crop loss is a serious deterrent to rural development due to terrain and steep slope as much as 38 degrees so crops farming has to be done manually as using modern technology is limited (Deshar, 2013; Palden, 2016; RGOB, 2016b).

Many of the world's poor people live in rural areas and particularly in developing countries farmers experience poor market access resulting to low adoption of modern agricultural technologies, lack of basic infrastructure (paths, trails, bridges and roads) and lack of transport services (Tobgay, 2005b). as a result marginal farmers usually get negative returns from crop productivity resorting farmers particularly educated youth to migrate to urban areas in search of better employment opportunities (Tobgay, 2005a; Gurung, 2015).

Social factor: comprises of peer pressure and parents expectation which relates to the argument of Gurung (2015) and Ueda (2016) that the education system and the way the perception of local people in Bhutan expect that their children and friends are expected to work in the civil service. This is consistent with the findings of Charles (2014) and Njeru et al. (2015) where youths in African countries such as Ghana and Kenya experience similar situation as in Bhutan. Also the agripreneurship or entrepreneurship in Bhutan is not considered as sustainable employment options mainly due to low market and higher uncertainty and risks.

Factors affecting youth perception on employment related to agriculture

The seven thematic factors were identified as the major constraints to agriculture development in Bhutan. The regression analysis revealed that out of seven components identified, three components such as crop loss ($r = .117$, $t(395) = 2.240$, $p < .05$), lack of resources ($r = .200$, $t(395) = -3.843$, $p < .001$) and parents pressure ($r = -.160$, $t(395) = -3.267$, $p < .05$) found to contribute significantly towards youth perception towards agriculture which is why agriculture related job fail to attract youth in Bhutan. Human wildlife Conflict (HWC) is a serious concern in Bhutan. When HWC either poses a serious threat to human welfare or if it involves endangered species of wildlife then it attracts a greater attention. In Bhutan both conditions apply (Wang and Macdonald, 2006). This is one of the reasons that youth are not very much eager about taking up agriculture or agriculture related jobs as the perceived returns from the agriculture is relatively low. The contribution of agriculture has declined and become the diminishing role as the main stay of Bhutan's GDP currently is declining. Even the employment in agriculture sectors is declining, for example, it was 75% in 1999 to about 60% in 2011 (UNDP, 2013).

In the context of lack of resources, Bhutan's high economic growth led to the changing structure of the economy, where growth has been relatively capital intensive while labour absorbing capacity in various sectors has stalled or even decreased while the job seekers in the country has increased significantly. Furthermore, for the economic transition, there is demand for youth having specific skills including requirement for vocational training graduates where graduates seeking jobs are mostly hold general degrees and do not fulfil the requirement. Even if the youths are employed, they either underperform or eventually leave jobs for better opportunities. It is therefore important that the effort be made to enhance the skills of the youth through skills development programme. It is also interesting that the number of students graduating from the higher secondary schools has been increasing significantly over the last decade or so (Figure 1). However, the report from the ministry of education also reveal that the number of child enrolment to school has peaked in 2010 and since then the enrolment has been decreasing. It indicates that the number of students graduating from school is expected to drop by the year 2022 and it also means that skills based education system would fulfil the requirement of the job market (RGOB, 2015a).

Farmers' and teachers' perception on agriculture in Bhutan

Although agriculture played and continue to play significant role in Bhutan with significant contribution to GDP but the farmers practice subsistence farming, and are marginal with small landholdings (Tobgay, 2005b). Although about 82% of respondents said that their main source of income is from agriculture but they were quick to mention that most of the agricultural products are perishable goods and need to be sold within a short period of time. When the market access is poor the products get perished and incur loss. On the other hand, the difficult terrain further limits crop farming, input cost is relatively

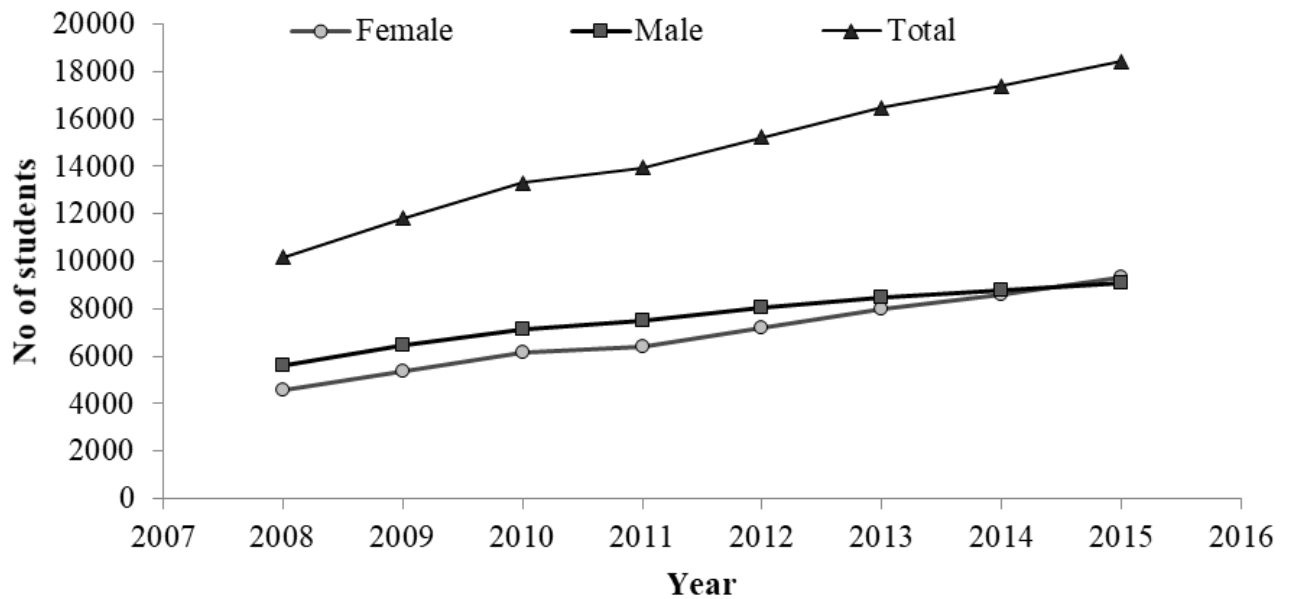


Figure 1: Statistics of number of students graduating from higher secondary schools

high so hiring farm labours also do not result in profits. Therefore, farmers think that it is better for their children to find employment in other sectors and not in agriculture. Farmers also mention that due to better basic services and infrastructure youth today prefer to live in urban areas but it is creating shrinking labour force required for the agriculture (Gosai and Sulewski, 2014). Teachers and farmers perceive that relevant agencies may be able to motivate young people by facilitating them to have access to agricultural loan; training the youth on scientific method of farming; techniques to manage pests and diseases; subsidizing agriculture inputs (fertilizers, farm machines etc.); linking the youth with relevant institutions for technical support for selling the farm products and encouraging youth to be entrepreneurs. These not only contribute to overcome major constraints to agriculture and rural development but also help reduce the youth unemployment in the country. Education system in Bhutan has not been able to produce students with sufficient scientific knowledge and technical skills who could be well suited to meet the demand of the job market.

Conclusion and Recommendation

Agriculture is the backbone to economy to many of the developing countries and is one of the important sectors for employment. In case of Bhutan subsistence farming in a marginal land is not able to attract the youth to agriculture based careers. It is interesting to note that age, qualification and region showed significant difference in terms of knowledge and perception but what is more surprising is that younger generation of youth and those who are studying in high school tend to hold more knowledge and perceive agriculture as potential job market for the youth. Crop losses due to wildlife depredation, lack of resources like inadequate land for farming, inadequate financial ability and pressure from parents to be employed in civil service are the main factors affecting youth in not willing

for employment in agriculture. Parents of the youth and teachers perceive that providing adequate financial and technical support may be able to attract youth for employment in agriculture. Currently, the situation in Bhutan is constrained by combination of farmers low education level and lack of adequate information on demand and price for the farm produce resulting in ignorance of sustainable management of natural resources and enhancing the productivity of the agricultural produce consequently capture of markets. Transforming the agriculture sector through technical, financial and moral support to farmers and particularly youth may help the country to address private sector development, youth unemployment and even the food insecurity. In addition, Bhutanese farmers has the long experience of dealing with HWC and currently is a major problem in rural areas so designing insurance mechanism to address the crop loss may be an important step to retain youth for agriculture farming. Bhutan has progressed in developing the economy and also infusing the developmental philosophy of Gross National happiness. However, private sector development till date failed to instil the youth to be entrepreneurial. This study however is limited to cross sectional data pertaining to youth and agriculture so conducting further research with longitudinal data mainly on changing preferences and perspectives of youth and market situation is highly recommended.

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Conflict of interest and Contribution

There is no conflict of interest, whatsoever, related with this manuscript.

All the authors mentioned in this manuscript have contributed equally to while making up this manuscript.

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The Relevance and Meaning of Charity in the Context of Micro-finance

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Abstract

Microfinance is a sector which often balances on the business-charity border. In this paper I claim that it is necessary to clearly distinguish between charitable and commercial forms of microfinance. The issue is especially important for (potential) donors to MFIs which rely on fundraising to finance their operations. I therefore propose theoretical parameters for charitable microfinance institutions (MFIs) and for the identification of charitable products: in this proposal, I define such institutions and products based mostly on a so-called normal profit criterion. Due to the difficulty of objectively calculating the level of normal profit, I suggest approximating the level of normal profit in microfinance based on the average prices of products in the commercial banking sector, as well as using other (country-specific) criteria. I also propose a system of product certification for charitable MFIs and charitable microfinance which is aimed at simplifying orientation in the micro-finance sector, mainly for donors, but also for clients and other stakeholders.

Key words: Charity in business, charitable microfinance, charitable microcredits, poverty alleviation

Introduction

The failure of conventional financial institutions to provide financial services to poor people is a major reason for the emergence of the microfinance movement. So-called micro-finance institutions (MFIs) have enabled access to financial services for more than 200 million people in developing countries (Maes and Reed 2012, 3). The financial services provided by MFIs are loans, saving products, financial transfers and insurance. Some MFIs also provide education oriented to skills necessary for business.

Leaders of the microfinance movement declare that poverty reduction is their mission and that financial sustainability is a key essence for sufficient range of services provided by MFIs (see for example Yunus 2008; Akula 2010). However, many MFIs have been diverted from their declared mission because of the overemphasis on financial sustainability (Hermes et al. 2011; Serrano-Cinca and Gutiérrez-Nieto 2014). Symptoms of mission drift include the provision of services mainly to lower middle-class people and the charging of high interest rates and fees (Karim 2011; Bateman 2010; for conceptualization of mission drift see for example Armendariz and Szafarz 2011)

Drifted organizations often ask the general public for financial contributions and label themselves and their products as being charitable or primarily aimed at benefit-

ing people. Microfinance NGOs which have transformed themselves into openly profit-driven companies after many years of being financed by altruistic donors have also caused controversy: one of the most famous cases is Mexican Banco Compartos (see for example Cull et al. 2009, 1-3). Both situations are unacceptable, therefore it is necessary to distinguish between charitable MFIs which maintain a strong social mission, and other MFIs.

There are initiatives, such as the SPTF network, which measure the social performance of MFIs. Incofin ECHOS®, developed by Dewez and Neisa (2009) and the Social Performance Index, developed by CERISE (see Bedécarrats 2011), are examples of composite indices which measure social performance and are used in academic literature. Microfinance organisations also have internal systems to measure the quality of their microfinance services. However, these initiatives, indicators and systems do not focus primarily on the issue of charitableness. In contemporary mainstream microfinance, the idea of social business is at the heart of discussions. According to a well-known definition from Muhammad Yunus, the objective of social business is to overcome poverty, or one or more problems which threaten people and society. Financial and economic sustainability is also a central theme of social business. Famous proponents of the term *social business* in microfinance, such as the Grameen Bank, refuse any subsidies or gifts. Those social businesses which accept subsidies and gifts aim to reach sustainability and to stop accepting them.

However, some organisations have a much clearer focus on helping the poor and much less (or no) emphasis on reaching financial sustainability. Although these organisations are a small minority in the microfinance movement, they do exist¹, and it makes sense to distinguish them from both commercial and social business microfinance organisations by labelling them *charitable microfinance*. Such a distinction would be useful, especially for altruistic donors.

Methodology

In this paper I propose some basic parameters for a system of product certification for charitable MFIs and charitable microfinance organisations. The aim is to simplify the orientation in the microfinance sector for donors, clients and other stakeholders. The first part of the paper focuses on the history of microfinance, with a special emphasis on the charitableness of MFIs. The relevance of distinguishing a charitable microfinance from business microfinance is also discussed, using the example of MFIs. The second part of the paper defines charity in the context of businesses built on a concept of normal profit. A proposal for framework parameters for charitable microcredits and charitable MFIs, and the basic details of a system for their certification are introduced in the third part. Although the proposal is, in principle, derived from the theoretical discussion in the second part of the paper, it also considers the specifics of microfinance and selected practical issues.

The first part of the paper is based on the literature review. Existing literature related to the researched issue is collected and analysed, such as the historical development of microfinance as a charitable tool. The second and third parts of the paper combine the literature review with logical argumentation (deductive and inductive approaches) and critical discussion. The literature has been collected from multiple media sources, such as academic journals, books, legal documents, government publications, etc. The paper thus contributes to an understanding of the current status of microfinance and charity and identifies some of their problems. Logical argumentation and critical discussion are used to define core concepts such as charity and charitable microfinance and to propose solutions needed in the microfinance industry.

The History and Presence of Microfinance as a Charitable Tool

Bangladeshi professor Muhammad Yunus is often seen as the founder of modern microfinance. In the 1970s, Yunus experimented with the provision of loans to poor people in Jobra village and subsequently founded the famous Grameen Bank. Its systems and its philosophy of financial sustainability was then replicated by MFIs all around the world. But the idea of helping the poor by providing them with cheap loans is much older. It had already appeared in the late Middle Ages and mainly came from the church.

According to Benigni (1913, 535), at the beginning of 14th century the French bishop Guillaume Durand de Saint-Pourçain suggested that city councils should offer loans to their citizens at low rates of interest. The aim of this suggestion² was to protect poor people against loan sharks. In 1361, Michael Nothbug, a bishop from London, provided capital for the founding of an institution which lent money without charging interest. A condition for a loan was that the borrower was able to pawn property with a value at least equivalent to the amount of the loan.

It can be said that Nothbug's institution used a similar concept to that which was later used by the organisation known as Montes Pietatis. According to Menning, Montes Pietatis was defined by its Franciscan founders as a "communal charitable institution" (1993, 207). Benigni defines it as a "charitable institution" which lends money at a low or zero rate of interest against pawned goods, with the aim of protecting people against loan sharks (1913, 534). As a charitable institution, Montes Pietatis only lent money to people who were going through a financial crisis. Any extra revenues created by charging interest or through fees were used to pay employees or to further extend their charitable work (Benigni 1913, 534).

Nothbug's organisation was quite short-lived as its overheads were paid for solely from the original capital provided by Nothbug (Benigni 1913, 535). On the other hand the Franciscans, Nothbug's successors, were able to maintain their financial support for Montes Pietatis. Moreover, interest rates were later established to cover the institution's overheads. Thanks to this policy, the Montes Pietatis network was able to spread all across Western Europe with little modification, and it survived for many centuries (Menning 1993, 27).

It should be noted that contemporary MFIs are influenced much more by Irish Loan Funds (ILFs) than by Montes Pietatis. ILFs operated in Ireland as a network of independent institutions from the beginning of the 18th century until the 1950s. The history of ILFs and society's reaction to them largely mirrors contemporary developments and discussions in the modern microfinance movement.

Interestingly, the first ILF was established in 1720 by the famous novelist Jonathan Swift. It lent money to poor traders without charging interest and was based on social liability. Swift had plenty of successors who financed similar funds, including the Dublin Musical Society (Hollis and Sweetman 2001, 295-296). In 1822, the London Committee for the Relief of the Distressed Irish founded a Reproductive Loan Fund Institution. This led to the creation of approximately one hundred new independent providers of microcredits.

New legislation aimed at regulating the funds' operations was approved one year later. The legislation established tax deductions in favour of the funds and it also allowed them to charge interest. The new rules increased the competitiveness of the funds and allowed them to finance their own expansion from the profits. By the beginning of the 1840s, after two decades of spectacular growth, the funds provided services to approximately 20 % of all inhabitants of Ireland (Hollis and Sweetman 2001: 296-300).

The names of the laws focusing on funds and their services imply that both loans and funds were deemed to be charitable. However, strict debt recovery policies and the high interest charged by the funds fuelled discussions concerning the degree to which their activities were still beneficial for the people. In reality, the funds were a mix of charitable organisations, business entities and loan sharks. For customers this situation was confusing (Clements 1843).

Although the microfinance movement underwent major development after the golden age of Irish Loan Funds, it seems that in some aspects the movement arrived at the situation already experienced in Ireland after the 1823 reforms. Discussing contemporary MFIs means discussing institutions which view themselves or are defined by the relevant legislation quite differently. Some MFIs are described as 'charitable microfinance institutions' (FINCA 2014; MicroLoan Foundation 2015), some as social business institutions and others as business entities or conventional banks. The leaders of some MFIs are keen to publicly disassociate themselves from the term charity, while others provide microfinance as well as comprehensive charitable programmes (for example Catholic Relief Services). To add more, critics perceive some MFIs as well disguised or poorly disguised loan sharks (see for example Karim 2011; Bateman 2010). Other authors discuss the issue of the 'ethical crisis' in the industry (Hudon and Sandberg, 2015).

The confusing situation described above is surely unhealthy for many stakeholders. Nowadays, charitable institutions with the primary aim of helping poor people and business entities whose main aim is to make a profit are labelled with the same name: MFIs. Undoubtedly, as with an efficient charity, an efficient, profit-driven business can greatly help

poor people. Despite that, the behaviour of the general public and potential donors shows that their willingness to support various institutions is influenced by the primary aims of such institutions. Information about the institutions' primary aims is also important for its clients and employees. The business-charity border matters.

Imagine an example of an extremely poor region, where two projects are proposed. The first project is a *Clothes Manufacture Investment Project*. The project aims to build a clothes manufacturing company in the region. It has a conventional business plan. If implemented, the project will bring new job opportunities. It is planned that employees will receive a salary typical of that paid to the local labour market. Working conditions as required by local laws will be guaranteed to them.

By applying for a job in the manufacturing industry, an applicant implicitly evaluates the employment offered by the manufacturer as being better than his former employment. Therefore, when at least one job offer is accepted by locals, the implementation of the *Clothes Manufacture Investment Project* will lead to an increase in welfare in society (for simplicity, let us assume that no negative externalities will be created by the manufacturer) and more than likely this will also lead to poverty reduction. For this reason we can conclude that the project will benefit poor local inhabitants.

The second project is the *Donate Clothes Campaign*. The *Donate Clothes Campaign* is aimed at distributing clothes to people in poor regions. It is a purely charitable project. If implemented, the project will lead to poverty alleviation and it will therefore increase the welfare of local people.

As briefly argued above, both projects have the potential to help locals. Both projects are also dependent on finance. While it is easy to imagine that a successful charity collection can be organized to support the *Donate Clothes Campaign*, it is hard to imagine that people would be willing to help selflessly the *Clothes Manufacture Investment Project*. This example shows that potential donors are sensitive to the question of whether giving help to people in need is a primary aim or only secondary. They are more willing to support selfless projects where help is the primary aim (that is also one of the reasons for people's reluctance to support charities with high overheads. See for example Uri et al. 2014 or Wong and Ortmann 2016).

Beside donors, a clear charity-business border also matters for clients and customers. People tend to be less cautious if they believe they are interacting with an institution which has charitable intentions. As a result, clients and customers who falsely believe they are to be recipients of charity, while they are in fact only interacting with an institution interested in conducting business, are at a higher risk of accepting a deal which is unfavourable to them.

It is worth noting that charity-business labelling is also important for employees. The microfinance sector is a good example. An employee of an MFI who is responsible for the provision of loans can make different decisions based on the MFI's priorities.

An employee can be instructed to primarily care for the wellbeing of a client or to mainly care about the institution's profits. An MFI with charitable intentions should evaluate the microcredit's potential to help or harm its client. An employee of a business MFI, on the other hand, is expected to evaluate the client's ability to repay the loan. A client being able to repay a loan does not necessarily mean that a microcredit is helpful (see for example Czura 2015; Taylor 2011).

Nowadays the microfinance sector has unclear charity-business borders, and this can cause some confusion and discussions among members of the general public and among professionals. The charity-business border is important for a variety of stakeholders, including potential donors and clients and employees of organisations working with poor people. A proposed location for the charity-business border and a definition of charity in business are discussed in the following part of the paper.

Charity and Business

Charitable activities are defined by Harrison as "generous actions or donations to aid the poor, ill, or helpless" (2008, 197). Dunn defines charity as "the act of giving money, goods or time to the unfortunate, either directly or by means of a charitable trust or other worthy cause" (2000, 223). For example the US administration perceives charity simply as "something given to a person or persons in need" (US Congress 1994, 53). From the definitions above it is possible to extract a minimalistic definition of charity as a 'gift to persons in need'. Using this definition though, it is important to perceive a gift in its altruistic meaning as something that makes another person fortunate or at least less unfortunate. Such a gift should maximize the utility to the recipient at some expense to the donor. This is not to say that the gift cannot imply a counter obligation. However, reciprocation may only be partial. For example, the donation of an item valued at 100 USD conditioned by provision of small service valued at 20 USD still fits the definition of a gift as used in this paper. If such a gift is given to person in need, then it is possible to label the donation of such a gift with conditions as a charitable act.

It can be deduced from the example above that voluntarily paying more for a service or a product to a person in need who runs a business should be labelled as a charitable act. Alternatively, if somebody is motivated primarily by altruism to buy a service or a product from a person in need (the motivation for the purchase is to help the producer but with no interest in the service or the product itself), then such a transaction can also be labelled as a charitable act, even without a voluntary price increase.

If a businessman reduces the price of a service or a product with the primary aim of maximizing its usefulness to a person in need and by doing so makes a voluntary economic loss, then such a step can be described as a charitable act in business. However, it is necessary to distinguish charitable acts in business from price discrimination. Price discrimination, first described and classified in detail by Pigou (1920), essentially relies on variations in customers' willingness to pay and leads to higher profits rather than to economic loss.

Concepts of accounting profit and economic profit are key elements in discussions concerning the location of the charity-business border. Accounting profit is calculated by the following formula:

$$\text{Accounting Profit} = \text{Total Revenues} - \text{Explicit Costs},$$

while economic profit is defined by the following formula:

$$\text{Economic Profit} = \text{Total Revenues} - \text{Explicit Costs} - \text{Implicit Costs}.$$

While explicit costs are direct payments made to others in the course of running a business (for example wages, rent or materials), implicit costs are any costs that result from any action or project's trade-off. Therefore, if the most profitable alternative project is less profitable than an implemented project, an economic profit can be achieved. If an alternative project is more profitable, then an economic loss is the outcome.

A businessman who decides to reduce the price of a service or a product with the aim of maximizing its usefulness to a recipient is obviously losing something. While this loss is well covered by the concept of economic profit, the same does not apply to an accounting profit. Imagine an example of a businessman who sells a product for 5 USD which has a production cost of 2 USD. As an altruistic gesture, the businessman decides to reduce the price to a poor person by 1 USD. Therefore, the new price of the product is only 4 USD.

For the businessman, the transaction means an accounting profit of 2 USD, because revenue is 4 USD and explicit cost is 2 USD ($4 \text{ USD} - 2 \text{ USD} = 2 \text{ USD}$). To calculate the economic profit, we need to first obtain the implicit cost of the transaction. An alternative to selling the product to a poor person at a reduced price was to sell it for the full price with no price reduction. This would create an accounting profit of 3 USD, because revenue would be 5 USD, while the explicit cost would remain at 2 USD ($5 \text{ USD} - 2 \text{ USD} = 3 \text{ USD}$). Therefore, the implicit cost of selling the product to a poor person at a reduced price is 3 USD. After the deduction of the explicit and implicit costs, we find that the transaction has meant an economic loss of 1 USD ($4 \text{ USD} - 2 \text{ USD} - 3 \text{ USD} = -1 \text{ USD}$) for the businessman,

Zero economic profit is the only level of profit which can be obtained in the long-term in a perfectly competitive market. In cases where the achievable profit would be abnormally high in some sectors, it would lead to the arrival of more competitors and they would push the profit down to the level of zero economic profit. In cases where the achievable profit would be abnormally low, some producers would leave the sector, which would push the profit up to the level of zero economic profit. To sell a product or a service for a price which does not allow the producer to achieve the level of zero economic profit in

such a market would lead to an economic loss for a business. The proposed charity-business border is attached to zero economic profit, also called normal profit. Charity can only start below the level of normal profit; economic loss is therefore inevitable. It is important to add that to call something a charitable act, economic loss must be caused by a *voluntary* decision led by the effort to maximize the utility of poor customers.

However, it should be added that it is difficult to identify the level of normal profit for sectors, individual companies and products in the real world as it is characterized by imperfectly competitive markets. Imagine an example of an antique dealer who is going to sell flawed but valuable antiques with an accounting profit of 1000 USD. She/He believes that the best alternative is to ask a restorer to repair the antiques. This would approximately double the price of the antiques, but it would also lead to a dramatic increase in costs. The result would be the same accounting profit of 1000 USD. Therefore, the dealer believes that the outcome of selling the antiques is a normal profit. However, if the dealer found that there was a well-skilled and cheap restorer in a different region and that their restoration would allow her/him to triple the price of the antiques, she/he would find that she/he actually incurs an economic loss.

Based on the discussion above, I define a charitable act as a gift which benefits a person in need. The gift must lead to an economic loss, but not necessarily to an accounting loss. It is important to note that this means that businesses practising charitable transactions only can be financially sustainable. Charitable activities in business can therefore be independent of external support and do not have to be subsidized by other non-charitable business activities. It is obvious that it is very hard to measure economic profit and to find a normal profit in the real world characterized by an imperfectly competitive market. In the following section all these findings will be applied to the microfinance context, and framework parameters for charitable microcredits and MFIs will be suggested.

Charitable Microfinance

It is difficult in practice to identify the level of normal profit and it is also necessary to distinguish charitable from non-charitable microfinance services, so there is a need to find a different way to identify charitable microfinance, one which approximates the criterion of normal profit and which is applicable in practice.

Distinguishing between charitable and non-charitable MFIs is important for their clients, employees and especially for donors, who often support MFIs based in and providing their services in different countries. This fact and the universal attitude towards charity described in the part *Charity and Business* is why I propose the establishment of internationally recognized criteria of charitableness in microfinance and of an internationally recognized microfinance authority. Such an authority can be established either by an organisation founded as a confederation of organisations (similar to the European network of NGOs called CONCORD), or it can be established as a cooperating organisation technically independent of those organisations (as was the case of MFTransparency in context of

microfinance). Theoretically, proposals for criteria can also be done by already existing microfinance initiatives such as CGAP or Mixmarket. However, these initiatives are dominated by people and organisations with a neoliberal background and are focused on the promotion of social business, which is not fully in accordance with the idea of charitable microfinance.

In terms of the certification of charitable MFIs or products, the microfinance movement can find inspiration in the Fair Trade system. In the case of Fair Trade, whole institutions are certified by the World Fair Trade Organisation (WFTO) and individual products are certified by Fairtrade Labelling Organizations International (FLO). Similar to microfinance, Fair Trade also balances on the business-charity border. One can argue that Fair Trade businesses are voluntarily generating economic loss by helping to provide better conditions for poor producers in an attempt to maximize their benefits. By accepting this perspective, we can view Fair Trade as a charitable activity. Critics of labelling Fair Trade as a charity usually argue that Fair Trade only ensures fair terms of trade, and therefore Fair Trade only leads to the improvement of badly set-up conventional trade, which is not a question of charity, but rather a question of being just and honest (see for example Nicholls and Opal 2004, 5).

However, there is no doubt that some customers perceive Fair Trade as a charity and that they also buy Fair Trade goods for altruistic reasons (for deeper discussions of customers' behaviour see Andorfer and Liebe, 2011; Salvador et al., 2013). Such customers cause themselves to incur a voluntarily loss in order to help others. For this reason, Fair Trade can be perceived as a charity (at least from the point of view of these customers).

Fair trade certification enables customers to identify those products whose purchase contributes to a 'good cause' and this therefore enables customers to be charitable. However, the same conditions as provided by Fair Trade companies can also be offered by organisations unwilling to pay for the certification process and thus do not have the Fair Trade label. I propose the creation of a similar certification system for charitable microcredits. The microcredits which met the established criteria would be denoted as 'charitable microcredits'. As with the Fair Trade system, those MFIs unwilling to undergo the certification process would be unable to use the *charitable microcredits* label.

While in the case of the Fair Trade system only the organisations unwilling to undergo the certification process are eliminated from the option of using the respective label, there would be also a second round of elimination in the case of *charitable microcredits*. As can be derived from the section *Charity and Business*, a charitable microcredit is a microcredit which increases the utility of a person in need. At the same time the provision of such a microcredit means a planned economic (but not necessarily an accounting loss) loss for the MFI. Because it is very difficult in practice to measure economic profit or loss, it is necessary to approximate this criterion somehow. A normal profit approximating criterion must be set in such a way that would stop the situation in which the *charitable microcredit*

label would be given to a microcredit which creates a normal or higher than normal profit. This stringent requirement for an approximating criterion can also lead to the elimination of some microcredit that create lower than normal profits.

I recommend setting the maximum price of *charitable microcredits*, either by binding their maximum annual percentage rate of interest (APR) below the average APR in the banking sector of the respective country to a segment of small loans or relatively close to the central bank's interest rate. To call a business transaction a charitable act, economic loss must be caused by a *voluntary* decision led by an effort to maximize the usefulness of the loan to a poor customer. This should be verified by the evaluation of an MFI's system of decision-making concerning the provision of microcredit to a client. Such a system should initially take into account any potential long-term positive effects of the microcredit on the living standards of a client and not only the ability of the client to repay the loan (i.e. for example investment loans should be preferred over consumption loans). To help identify a poor customer the international poverty line; a national poverty line set by the government, or a non-income indices of poverty such as the increasingly popular asset indices (see for example Ezrari and Verme 2012 or Cardozo and Grosse 2009) can be used.

Beside the three main criteria (low price of microcredits; provision of microcredits based on potential effects on living standards of a client; provision of microcredits to a poor client), the inclusion of other criteria can be considered. It can be, for example, mandatory to evaluate the effects of the charitable microcredits on its clients or to evaluate the provision of microcredits used only for investments and not for consumption. However, it is important to note that every extra criterion means a more expensive certification process. This also reduces the probability that MFIs which provide charitable microcredits only can achieve an accounting profit. The ability to achieve an accounting profit by such MFIs will also be greatly influenced by the exact determination of the maximum price of microcredits.

Certification can be applied not only to microcredits, but also to other microfinance products and to all MFIs. A certification of microsavings and microinsurance should be based on the same principles as the certification of microcredits. Certification of all MFIs should be conditioned not only by the provision of the charitable microfinance products exclusively, but also by other criteria relevant to the whole organisation rather than to the individual products. The criteria for *charitable MFIs* can also include being a non-profit organisation, because such a legal status indicates that the priority of the organisation is to help people rather than to generate a profit. Other criteria which should be considered for inclusion are ensuring good working conditions of the employees and an emphasis on the democratic governance of the MFI.

Conclusion

In this paper I focused on the issue of relevance and the meaning of charity in the context of microfinance. I highlighted the historical roots of microcredits, as far back as the Middle Ages, and also drew attention to the discussions which arose from the diversity within the microfinance movement. While some MFIs claim they are a charity, others claim they are entrepreneurs or social entrepreneurs. Contradictions in the perception of MFIs as a result of this diversity has already been well documented in Ireland from the 19th century and is also present today. The distinction between charity and entrepreneurship in the microfinance sector is important for (potential) donors and also for clients and employees of MFIs.

In this paper I argue that beside distinguishing between conventional and social business, we should also distinguish between social business and charitable microfinance. The simplest definition of charity is ‘a gift to a person in need’ and with the concept of normal profit this was used in the discussion about charity in a business context. It was stated that the term ‘gift’ can be used in a broader meaning as something that makes another person fortunate or at least less unfortunate, and that brings utility to the gifted person at the expense of the donor. Loss for a giver implies that the giver must end up in economic loss. Charity in business is therefore restricted to zero economic profit, also called normal profit. As economic loss does not imply accounting loss, this definition of charity in business allows charitable activities to be financially sustainable and therefore independent of external support and other profit-making activities of a charity provider.

The definition of charity in business is also applicable to microfinance products. As it is difficult to calculate or estimate the level of normal profit in microfinance, I propose approximating the normal profit using the price of the microfinance products. In the case of microcredits, the price of a loan as expressed by APR should be used. The average APR in the segment of credits in a local banking sector or a local central bank's interest rate can be used as a benchmark for setting the threshold for the charitable microcredits label. Other criteria must also be met for the microcredit to be labelled as a charitable microcredit. A system of microcredit provision decision-making must first take into account the potential long-term effects of the microcredits on the living standards of a client. Only people living below the international or national poverty line should be the recipients of charitable microcredits.

As with the Fair Trade systems of certification, all organisations can be labelled as charitable. Such a certification of MFIs would be conditioned only by the provision of charitable microfinance products and also by other criteria. The ability of charitable MFIs to achieve an accounting profit will depend not only on the quantity of the criteria, but also on their stringency, especially in the case of the designation of the maximum price of microcredits and other products. Although this issue is beyond the scope of this paper, it is important to note that the maximum price must be set in such a way that will stop a situation where

the charitable product label is given to any product which creates a normal or higher than normal profit. The principal advantage of criteria based on the maximum price derived from the level of normal profit is that it is independent of the issue of profitability of the individual products or of the individual MFIs. Therefore, loss-making caused by the ineffectiveness of MFI cannot be falsely passed off as charitableness.

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Notes

¹ Amongst them are for example Czech NGOs Fair z.s, Shinebean z.s. (both implementing their activities in Kenya) or Maendeleo (implementing its activities in Tanzania).

² It is not known whether the suggestion was implemented.

³ The original aim of the committee was to raise a general subscription to relieve the famine in Ireland caused by crop failure. However, after the famine was over the committee was left with a considerable amount of money and no clear mandate what to do with it. It was decided to use this money as basic capital for a new loan fund.

⁴ For example: Charitable Loan Fund Act (Dillon 1899), Charitable Loans Societies Act (Atkinson 1898), Charitable Loans Act (Hemphill 1900).

⁵ Since then the Microfinance movement has been greatly influenced by such cooperatives as Raiffeisen and Schultz-Delitzsch and by agricultural development banks.

⁶ For example, Yunus (2008, 205-269) describes charity as an ineffective tool to help the poor.

⁷ For a complex discussion of the relationship between profitability and the poverty alleviation effects of MFIs' operations, see Morduch (2000) or Mersland and Strøm (2010). Also, profit-driven businesses are (unlike charities) key drivers of economic growth, which positively influences levels of poverty and human development (see for example Harmáček et al. 2016 or Schlossarek et al. 2016).

⁸ Term 'person in need' includes all categories of people mentioned in Harrison's and Dunn's definitions: poor people, ill people, helpless people, and unfortunate people.

⁹ Such a person does not equate the product or service bought from a person in need to the price paid. Reciprocation for money paid to a person in need for his/her services or product is therefore, from a customer's point of view, only partial.

¹⁰ Implicit costs are also called opportunity costs.

¹¹ A perfectly competitive market is a hypothetical market where competition is at its greatest possible level.

¹² In such cases, economic profit reached by sectoral producers would be higher than zero, which would mean that all alternatives would be less profitable for them.

¹³ In such cases economic profits achieved by sectoral producers would be lower than zero, which would mean that at least one alternative would be more profitable for them.

¹⁴ An imperfectly competitive market is, for example, a market characterized by consumers with imperfect information or by barriers to producers entering and leaving the market.

¹⁵ In fact, deciding about the charitableness of an organization competing in an imperfectly competitive market based on profitability would be inappropriate. Imagine the situation when an efficient MFI creates a profit and charges a lower rate than an inefficient MFI which finds itself operating at a loss. Based on profitability criteria, we would - ironically - award the charitable label to the MFI that is costlier for clients.

¹⁶ The exact formula could be country-specific and based on the decision of local committees of a certifying organization. The author is aware that in many countries including Bangladesh, there is an imposed cap on interest rates and an extensive regulation of the sector by either banking authorities or separate microfinance regulatory entities. However, for charitable microfinance, regulations can be much stricter, as the only "punishment" for MFIs unable to adhere to them would be the inability to obtain a certificate of charitableness.

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