

INSTITUTE OF ECONOMIC STUDIES  
FACULTY OF SOCIAL SCIENCES  
CHARLES UNIVERSITY IN PRAGUE



# BACHELOR THESIS

Analysis on Market for Remittances in the Czech Republic  
Case study: Migrants' money transfer from the CR to Mongolia

Author: Tuvshinbat Dorj  
Supervisor: Doc.Ing. Tomáš Cahlík CSc.  
Field of study: Economics

03. 05. 2011, Prague

signature of student

Tato bakalářská práce byla vypracována na IES, Fakulta Sociálních věd, Univerzity Karlovy v Praze v období (květen 2010 – květen 2011)

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## **Acknowledgments**

My special gratitude goes to IES, FSV Charles University for guiding me through the academic world. The knowledge and the wisdom I thrilled to obtain will always be the essential in my both personal and academic life in future.

Further I would like to thank to my supervisor Doc. Ing. Tomáš Cahlík CSc. from the IES, FSV, UK, whose valuable comments and suggestions encouraged me to strive for a better work and helped me to complete the thesis.

Last but not the least, I am truly thankful to my family and friends for always standing by and never stopped believing in me.

Název práce: Analýza na trhu remitencí v ČR  
Autor: Tuvshinbat Dorj  
Vedoucí bakalářské práce: Doc.Ing. Tomáš Cahlík CSc.  
E-mail vedoucího:

Abstrakt:

Tato bakalářská práce se pokouší vrhnout světlo na cestu remitencí mezi Českou republikou a Mongolskem, v rámci analýzy založené pouze na znalosti autora, protože publikované odborné analýzy odborníků zatím neexistují. Tato práce zkoumá nejen podmínky na trhu remitencí v České republice jako celek, ale také se snaží zachytit klíčové determinanty remitencí a specifické remitentní chování migrantů, speciálně mongolských migrantů.

Data používaná v kvalitativních a kvantitativních metodách empirického výzkumu je založena na sesbíraných datech, kterých autor získal, když se zúčastnil jako dotazující v průzkumu remitenčního trhu v České republice.

Studie odhaluje, že i přes existenci uspokojivého transparentního trhu a infrastruktury, konkurenční prostředí relativně neuspokojivý. Hlavní hráči trhu nespěchají s lákáním zákazníků a průzkumu možností nových služeb. Ale málo poskytovatelů remitečních služeb, jako např. Chequipoint, a.s., nasazují aktivní marketingové strategie a stávají se mezi mongolskými migranty jedním z nejvyužívanějších poskytovatelů.

Studie také zdůrazňuje problémy související s ochranou spotřebitelů, jejich finančním vzděláváním a jazykovou bariérou migrantů. Jinak je velmi těžké prosazovat pravidla ochrany spotřebitelů.

Regresní odhad ukazuje, že mongolské migranti preferují levnou službu před rychlejší, zato dražší službou.

Autor zdůrazňuje potřebu větší spolupráce mezi souvisejícími státními institucemi a migrantskými komunitami, aby se zbavili výše zmíněných problémů kvůli nedostatku finanční znalosti a jazykovými bariéry. Dále i neziskové organizace, jejichž služby se cílí na migranty, by mohly sloužit jako koordinátor průzkumu mezi migranty.

Také jednotlivé firmy i existující poskytovatelé služeb převodu peněz do zahraničí by mohly lépe přizpůsobit své marketingové nástroje specifickým charakteristikám jednotlivých národností a své služby pro získání nových zákazníků a rozvoj své firmy

Klíčová slova:

Mezinárodní Remitence, Poskytovatelé Remitenčních Převodů, Migrace, Migranti, Převod Peněz, Česká republika, Mongolsko

Title: Analysis on market for remittances in the CR

Author: Tuvshinbat Dorj

Supervisor: Doc.Ing. Tomáš Cahlík CSc.

Supervisor's e-mail:

Abstract:

The thesis attempts to shed a light on a remittance corridor between Czech Republic and Mongolia, as to the author's knowledge there has been no studies looking to the very area. The thesis not only investigates the conditions of the market for remittances in the CR as a whole but also tries to capture the key determination of remittances and specific remitting behavior of the migrants, i.e., Mongolian migrants.

Empirical study with both qualitative and quantitative research methods is carried based on the data collected by author himself while participating as an interviewer in a survey on market for remittances in the CR.

The study reveals that although the market transparency and infrastructure is satisfactory, the level of competition is relatively low. As such, the main players on the market do not haste to attract their customers and research other service possibilities. But certain money transfer operators (MTO) for example "Chequepoint" a.s employs active marketing strategy and it already realized most favorable MTO among Mongolian migrants.

Also the study highlights that the policies related to customer protection issues should consider on the financial literacy and language barrier of the migrants as well. Otherwise it is not possible to implement policies on customer protection issues.

Regression estimate shows Mongolian migrants prefers cheaper services rather than the fast yet expensive transfers.

The author recommends that there is need of further team work between related state institutions and migrant communities for a removing certain problems tackled to migrants due to lack of financial literacy and language barrier. Furthermore, Non-Government institutions with the aim of migration related matters can be employed as good survey conductor among migrants.

Also the individual companies which want to enter to this market or existing providers should maintain on characteristics on different ethnicity and use it as a marketing policy for the further development of the company.

Keywords:

International remittances, Remittance service providers, Migration, Migrants, Money Transfer, Czech Republic, Mongolia.

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## LIST OF ABBREVIATIONS

ATM	-	Automated -Teller Machine
BOP	-	Balance of Payment
CNB	-	Czech National Bank
CR	-	Czech Republic
CZK	-	Czech Koruna
EC	-	Exclusivity Conditions
EU	-	European Union
EUR	-	Euro Zone Currency
GDP	-	Gross Domestic Product
GP	-	General Principal
IOM	-	International Organization for Migrants
MG	-	Money Gram
MTO	-	Money Transfer Operators
MTS	-	Money Transfer Service
NBFI	-	Non Bank Financial Institutions
NGO	-	Non Government Organization
OLS	-	Ordinary Least Square
RSP	-	Remittance Service Provider
TUG	-	Mongolian National Currency
USD	-	United States' Dollar
WB	-	World Bank
WU	-	Western Union

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## INTRODUCTION

As a student from a developing country, living among many other compatriot migrants with same nationality in a foreign country, I am always interested in migration related issues, especially migration policies issued by our host country, the Czech Republic (CR). Having an opportunity to participate in a Czech national survey on the market for remittances as an interviewer (*See page 21*) gave me a greater chance to understand in depth how migrants work, live, and put aside part of their income to remit back to the home country. It was not only interesting but also informative to discuss with migrants about remittance related issues and their ways of dealing with remittance sending problems. It eventually led me to write the bachelor thesis on this field.

The term international remittance is relatively new issue and it was introduced recently in the 20<sup>st</sup> century. In recent years, the potential impacts of remittances on economic growth of individual countries have become an attractive area of study among researchers and policymakers. For example, Ralph and Adolfo (2008) document that in many remittance-receiving developing economies remittance flows exceed foreign direct investment, portfolio flows from financial markets, and official development assistance. Some countries' total remittance receipts amount to a substantial portion of their imports and a nontrivial fraction of GDP.<sup>1</sup> In such cases it is reasonable to assume that overall impact of remittances on receiving countries economic is considerable and this is the main reason why remittances should be studied.

After political revolution of the CR in 1989, there were a lot of changes that took place politically and economically. This also brought a big alteration to the migration policy of the country and since then it has become a work force importing country instead of exporting one. In a period of the last let's say 18 years (1993-recent) the CR has become a migration destination. According to the Czech Statistics Office, at the end of year 2008 (31.12.2008) a total of 438,301 foreign citizens were holding a residence permit of the CR (*See Graph 4 in the appendices*).

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<sup>1</sup> Source: Ralph Chami, Adolfo Barajas and Others, International Monetary Fund, "Macroeconomic Consequences of Remittance", ISBN 978-1-58906-701-1, 2008, pg. 1-2

The CR has become one of the most attractive destinations for Mongolian migrants since 1998. But a large number of Mongolian migrants with a long-term permit have been settling in the CR since the year 2003. According to the Czech Statistics Office in 2003 there were 1331 registered migrants, in 2004 the number increased to 1794, 2126 in 2005, 2504 in 2006, 4939 in 2007 and it reached its maximum with 7104 people in 2008. But this number decreased to 5636 at the beginning 2010<sup>2</sup>.

Moreover, remittance from the CR to Mongolia has been increasing steadily in the past 10 years due to increasing number of migrants. Despite it, there are no sufficient studies and research works by either countries' related administrations or research institutions. Therefore the study on characteristics and functioning of this remittance corridor between the countries should not be abandoned and furthermore the conditions of the market for remittances in the CR and key determinations of migrant remittances should be studied systematically.

In this paper, the Czech remittance market is assessed to be relatively transparent in standpoint of possibility to know transfer speed, total price of the services and the payment system infrastructure of the country is well developed. Migrants are able to know the transaction speed and total price of the services in most cases and access points are broadly reachable in territory of the country. But consumer protection issues are still very sensitive problems in the CR. Due to language barrier and less financial knowledge, many migrants are not able to claim their rights. For example, poorly educated migrant who speaks only his native language has limited possibility of comprehensive usage of remittance services and requires assistance of another person in order to have an access to the services. As a result, they tackle with many problems such as loss of money, additional charge, and incorrect amounts received.

The Czech remittance market has been conducted to be relatively less competitive and it relies mostly on money transfer operators (MTO). The most preferred MTO among Mongolian migrants is "Chequepoint a.s" whose active and close marketing policy brought them most preferred remittance service provider (RSP) in the remittance market. The market participants such as commercial banks, credit unions and post offices are much less popular and informal ways of sending money are quite trendy among Mongolian community. The empirical estimation model confirms that Mongolian migrants are more likely to use slow speed services which charges less fee for the services provided. In other words, migrants prefer cheaper price to quick

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<sup>2</sup> Source: [http://www.czso.cz/csu/cizinci.nsf/t/B900334BBE/\\$File/c01r02.pdf](http://www.czso.cz/csu/cizinci.nsf/t/B900334BBE/$File/c01r02.pdf), (14.12.2010)

transaction service. Also Mongolian female migrants tend to send greater value of remittances than male ones (*see Chapter 4*).

The studies on Czech remittance market have attracted researchers' attention only recently. Therefore, literatures on this field cover very small area and are limited to few sample survey outcomes and the central bank studies (*see literature review part*). The data availability is one of problematic issues in further research studies of remittance market. Every empirical study demands certain type of empirical database, especially long-term data compile is very important to outline certain trend of remittances features. But time-series data on remittances in the CR is available only from 2005. Therefore, empirical analysis based on qualified data does not almost exist in the current literature fund.

Nonetheless, existing sample survey outcomes (see Marco and Carlo, 2010; Blanka and Tereza, 2009) typically confirm 2 findings that, Czech remittance market is relatively low competitive and important participants of the market such as banks and post offices are largely unused for remittance services, secondly payment system infrastructure is well developed and remittance collecting points are widely available in the CR. As opposed to the findings of the thesis, their survey outcome confirms that market for remittance service in the CR is relatively at the low level of transparency and consumer protection.<sup>3</sup> Although there are many research studies on determination of remittances and certain remittance corridors in various countries, this thesis might be the first paper attempting to study the Czech-Mongolian remittances corridor.

The remainder of this paper is structured as follows:

The first part of the thesis provides an overview of studies on the remittances and existing literatures on Czech remittance market. In part two services as an introduction to the remittance market terminology, its participants and environments. In the third part Czech remittance market and Czech Mongolian remittance corridor are described and related analyses are provided. The forth part s entirely devoted to the empirical analysis. Determinants of the remittance are studied in depth based on the data obtained. Finally, part five remarks the conclusion of the thesis and the empirical analyses along with suggestion of further policy implementation.

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<sup>3</sup> Source: Marco Nicoli and Carlo Corazza "The market for Remittance Services in the Czech Republic" ISBN: 978-0-8213-8585-2

# 1. LITERATURE OF REVIEW

## 1.1 A BASIC FRAMEWORK OF LITERATURE

International remittances refer to money and goods that are transmitted to households by migrants working outside of their countries. At the start of the 20<sup>st</sup> century these resources represented one of the key issues in economic development<sup>4</sup> and attracted attention of researchers and policymakers. Although there have been numerous research studies, articles and books published during its development, only few of them influenced most and many questions remain unanswered. Particularly, the study on determinants of remittances is still waiting its explanations. According to Jorgan Carling (2008), qualified studies have not been introduced yet on the issue of determinants of remittances since Lukas and Stark's (1985) seminal article "Motivations to remit: evidence from Botswana". In fact, at the micro-economic level, Lucas and Stark (1985) were the first to elaborate a formal model for analyzing the remittances of migrant workers.

Remittance related literatures and publishes heavily depend on empirical researchers who would demand qualified database. Hence, the study on remittance is begun by compiling data on remittances. According to Jorgan Carling (2005), there are primarily two sources of remittances data: 1. Sample surveys among migrants or recipients; 2. Information collected by central banks and published as part of the Balance of Payment (BOP) statistics.

For inter-national comparison and trends over time, the BOPs and central banks statistics are used mostly. In contrary, survey data are useful for examining the social and micro-economic dynamics of remittances, characteristics of remittance transfers, behavior of remittance sender and receiver, remittance transferred through informal channels and so on.

In reality, the data on remittances are very difficult to compile, because they characterize numerous, small transaction through a large variety of channels. As a result, the quality of data on remittances is very poor. According to EUROSTAT (is the statistical office of the European Union situated in Luxemburg) EU countries all face certain problems about quality of surveys as

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<sup>4</sup> Source: Richard H, Adams JR, WB Working Paper, "The determinants of International remittances in developing countries", 2009

remittances measurements and methods used for compiling data differ across Europe and worldwide.<sup>5</sup>

## *1.2 MACROECONOMIC AND MICROECONOMIC APPROACHES*

The literatures on remittance can be separated into two categories according to their area of study: One approach focusing on micro-economic variables, and the other one focusing on macro-economic factors.

In recent years, the potential impacts of remittances on economic growth of individual countries have become an attractive area of study among researchers and policymakers and there are two main interests of policymakers with regard to remittances: How to manage their macroeconomic effects and how to harness their development potential. Furthermore macroeconomic level of remittances also concentrates on following wide range of problems (Jorgen Carling, 2005):<sup>6</sup>

- The characteristics and determinants of remittances
- Measurement and volume of remittances
- Remittance transfer mechanisms
- The management of remittance funds and remittance market
- The uses and impact of remittances
- Diasporas' contributions to development

On the other hand, Microeconomic approaches treat remittances mainly as a household issue and the literatures (Yoko Niimi, Thai Hung Pham, 2008; Mechthild Schrooten, 2006; and Aziz Atamanov, Marrit van den Berg , 2010).<sup>7</sup> that have focused on remittances are more likely to explain remittances' patterns and motivations for remitting, microeconomic and socio-demographic determinants of remittances, remittances' impact on family consumption etc., by using sample survey data. Outcomes of these studies usually confirm that at the micro-level

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<sup>5</sup> Source: Daniela Comini and Franca Faes-Cannito, EUROSTAT working paper No.40, "Statistics in focus", 2010

<sup>6</sup> Source: Jorgen Carling, Prio report, "Migrant remittances and development cooperation", 2005

<sup>7</sup> Source: Richard H, Adams JR, WB, The determinants of International remittances in developing countries, 2009.

remittances have positive impact on household consumption, finance on small business, education and healthcare of the household members.

### 1.3 LITERATURE ON THE CZECH REMITTANCE MARKET

The literatures on market for remittances of the Czech Republic (CR) are insufficient at my knowledge and are limited to few several sample survey outcomes and the central bank studies. It was only in 2008 when a major survey for market for remittance in the CR was started by Payment System Development Group of the WB (PSDG) on request of Czech authorities. The survey covered 8 different nationalities and was completed in 2010. From this perspective, remittance related issues are currently coming into attention of Czech authorities and researchers.

Survey results show that, there is low level of competition in the market for remittances in the CR. However payment system infrastructure is well developed and remittance collecting points are widely available in the CR most important participants of the market banks and post offices and their potential sources are largely unused for remittance services. Also survey findings confirm that market for remittance in the CR is relatively at the low level of transparency and consumer protection.<sup>8</sup>

Petr Sedlacek (CNB) has conducted a study in 2010, “Remittances from the CR”, with an aim to provide basic information on remittance flows out of the CR since 2005 and intends to determine domestic factors affecting the remittances flows.

According to him time-series data on remittances in CR is available only since 2005 due to methodological change in data collection in 2005. As a result of short time series data empirical investigation is very limited. Understanding simple correlative relationships and formal econometrical analysis was almost impossible because of insufficient database. However, this study highlighted following conclusions:

- The level of remittance is inversely proportional to the health of the host economy (here, interest rate, exchange rate, unemployment rate and GDP).
- Demographics’ variables and income level of the migrant seem to be accounted for the remittance.

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<sup>8</sup> Source: Marco Nicoli and Carlo Corazza “The market for Remittance Services in the Czech Republic” ISBN: 978-0-8213-8585-2

Nonetheless, there is no way to say solitary conclusion for small sample database. For example, between the growth rate of real average wage and remittances have different correlations in various cases. Remittances to Ukraine and the Republic of Moldavia have no relation to the real wage whereas remittances to Vietnam and Russian Federation negatively correlated and to China and Poland positively correlated. For all countries combined correlation is negative. Also study shows that there is a slightly negative correlation between the average fraction of long-term migrants and the average level of remittances.

Moreover numbers of presentations about Czech remittance market and remittance related have been presented at the following two seminars held during last two years:

1. “Remittance flows from the CR and their development impact”, by the Multicultural Center Prague and Ministry of Finance, February 24, 2009
2. “The Market for Remittance Services in the CR: outcomes of a survey among migrants”, by Ministry of Finance Prague, CR, October 26, 2010

For further information please see the brief summaries of these presentations in the appendices section (*See table 3 in the appendices*).

## 2. OVERVIEW OF THE MARKET FOR REMITTANCES

### 2.1 DEFINITION OF REMITTANCES

There are two types of remittance transfers: internal remittances and external remittances. Internal remittance refers transfers within the country. These transfers are more likely to flow from urban areas to the rural parts of the country. On the other hand, external remittance transfers are shifted from one country to others. Basically, it can be understood as small amount of cross-border and person-to-person money transfer via RSP. At the frame of this bachelor work, I will focus only on International (external) remittances. In reality, this type of money transfer is a regular amount of money transfer from migrant workers and mostly from developed countries to developing countries. The most important peculiarity of these types of transfers is transfer between low-income individuals to same level of people. Therefore, remittance transfer is a very important type of money transfer which has very rare influence on the social and economic aspect of receiving country.

Sometimes it is difficult to distinguish remittances from other similar transfers. For example, The International Monetary Fund defined three forms of money transfers that have nearly same meaning in reality.

1. Workers' remittances are transfers of goods and finances from workers who remain abroad for a period of one year or longer;
2. Compensation of employees are transactions from persons who remain abroad for a period shorter than one year;
3. Migrants' transfers are flows of goods and funds linked to cross-border migration (for example, daily commuting to work across borders)<sup>9</sup>.

The third and second forms are not likely to be used for specialized literatures and works on remittances. The first category is rather used for both general and specialized literatures on remittance. Moreover, in The Balance of Payments Manual 5, workers' remittances is defined as current transfers by migrants considered as residents (they are expected to stay and work for more than a year in the new economy) to residents in their country of origin. However, due to difficulty in classifying residents, the WB uses as extended definition of remittances which is applied in our thesis and it includes, in addition to worker's remittances, compensation of employees (net wages and salaries of nonresident migrants) and migrants' capital transfers<sup>10</sup> (but in our case, we do not consider on capital transfers).

## ***2.2 REMITTANCE SERVICE PROVIDERS (RSP) AND THEIR SERVICES***

At the frame of this bachelor work we will understand RSP is the person or business who provides money transfer services. Basically we could divide RSP into three categories according to their services' legality as follows:

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<sup>9</sup> Source: Gammeltoft, P. 2002: Remittances and other financial flows to developing countries. International migration, 2002, Vol.40, no.5, pg. 181-209

<sup>10</sup> Source: Mushtaq Hussian, EUROSTAT, "Measuring migrants' remittances: From the perspective of European Commission", 2005, pg 2.

### ***Official financial institutions***

The official financial institutions are the banks, post offices and Money Transfer Operators (MTO, the companies that specialize in international money transfer). Those institutions usually make use of their own financial infrastructure (e.g. their network, access points) or already established international or local infrastructure that exist in both sending and receiving countries. There are multiple institutions existing and providing services in market for remittance in CR.

#### ➤ Banking services

The availability of access to the infrastructure is not same for different types of institutions. In most countries, only banks are allowed to use directly domestic payment system or domestic infrastructure.<sup>11</sup> Non-banks don't have direct access to the payment system; they have to access only as customers of banks. For the banks, this is an advantage compared to other RSPs. Nonetheless, banking transfers are not favor of the small amount of funds and it is considered as an expensive service among others. The main methods that are used among migrants to transfer funds through banks are the following: -

#### - *Open bank account in the CR and use of payment cards*

This method is relatively common among the migrants. They deposit money in their bank account in the CR and withdraw cash using an international payment card in home countries. To obtain payment card for their relatives (receivers) in the home countries from their bank in CR is of course not easy. But it is possible to pre-negotiate with the bank or send their payment card home (to receivers) by courier (friends and relatives traveling). Although this method is simple and safety, but the fees charged by ATM abroad are usually high.

#### - *Account-to-account transfer*

The second general way to remit fund via bank is called account-to-account transfer which enables a migrant's fund to shift from already existing accounts to either the internal accounts or external accounts. The remittance transaction through banks is not in favor of migrants because of high service costs and insufficient information availability during transaction process. In

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<sup>11</sup> Source: Committee on Payment and Settlement Systems and The WB, General principles for international remittance services, Pg 18, ISBN 92-9131-732-2, 2007

addition, banking services require certain degree of language knowledge and several types of documents. These are the handicaps for many migrants, who have problems with their credentials and have a language barrier. Therefore banking transactions remain unpopular means of remittance transactions among migrants.

➤ Money Transfer Services (MTS) via post offices

The Czech Post office offers 3 different types of MTSS.

- Money order Z/A
- Money order Z/C
- Western Union (WU)

The “Money order Z/A” enables customers to send money to several listed countries. The recipients who live in destination countries (Belarus, Bulgaria, Hungary and Poland) can receive their transaction in their bank accounts. The form of payment to the recipient is only through bank accounts and also there is a maximum amount that can be sent. These are the existing restrictions of this transfer service.

According to the source of the Czech Post Office, the maximum amount accepted to send to Belarus is USD 500, to Bulgaria EUR 1000, to Hungary EUR 2500 and to Poland USD 2000. The advantage of this transfer service is relatively low price. The Czech Post office charges CZK 90 for up to CZK 6500 transfer, CZK 115 for up to CZK 13000 and CZK 145 for more than CZK 13000 transfer<sup>12</sup>. If we calculate it in US dollars (USD1 ≈ CZK 17), it is about USD 5 for USD 380 transfer and USD 8.5 for more than USD 765. It seems the price of the post office service is relatively cheaper, but it doesn't mean total fee charged by migrants' family is low always. In certain cases, the money sent by migrant is not received in the original form of currency but in the currencies of the receiving countries. Therefore, the post office of the receiving country deducts exchange fee by using its' own currency exchange rate which is fairly less than market exchange rate level. As a result senders may pay more than the total fee of other RSP transfer services.

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<sup>12</sup> Latest information are available at [www.cpost.cz](http://www.cpost.cz)

The “Money order Z/C” is more comfortable because the recipients can take money in form of cash and the list of the countries accepting Money Orders Z/C is quite long. There are 13 countries on the list (Belgium, Belarus, Bulgaria, France, Italy, Lithuania, Latvia, Hungary, Monaco, Poland, Romania, Ukraine and Vietnam). As above mentioned Z/A, there are also certain limits of maximum amount accepted. For example, the customer could send up to EUR 3500 per one transaction. The price of this transfer service is same as “Money order Z/A”.

I would say that the “Money order Z/A and Z/C” are more favorable for the migrant workers especially migrants from the listed countries. But during our survey it was investigated that so far these services are almost unknown among migrant groups and there was certain information lack on the market.

WU is one of fastest, more secure MTSs in the world. According to WU, money services have been available at Czech Post branches since July 1<sup>st</sup>, 2002 under an agreement with PES (Peněžní Expresní Service), s.r.o., a local agent of WU financial services, INC<sup>13</sup>. The customers can access WU service at any of the post offices in the CR. I will describe WU in detail in the following section.

➤ MTOs

According to report of the ministry of finance of the CR, there is no official publicly available list of the names of MTOs who operate in the market for remittance of the CR. Nonetheless, following are observable on the internet: CG Pay Limited, Chequepoint, Euro-Financial Corporation s.r.o., Accredi s.r.o., MoneyGram (MG), PDW (družstvo), Anelik, UNISStream and the WU.

During our survey, it was found that most of those financial institutions are unknown or partially known among migrants. For example, Anelik, PDW and the UNISStream are well known only among Russian speaking migrants and for others not. According to migrants, these MTOs are reliable and furthermore easily accessible (meaning no language barrier) but their working (serving) area is restrictive, meaning agent of the MTOs are not in all parts of the CR and in countries of origin.

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<sup>13</sup> Source: official web site of the Czech Postal Office, <http://www.ceskaposta.cz/cz/sluzby/penezni-sluzby/zahranici/western-union-id262/>

On the other hand, WU, MG and Chequepoint are well known as very secure, fast, and reliable RSPs among migrants. Nonetheless, the service cost of WU and MG are relatively high compared to other MTOs. Nevertheless, easily accessible branches and quick transaction processes are the advantages of their services. Migrants are able to send money even from smaller towns thanks to dense network of branches of WU and Czech Post office.

The Remitting process through MTO is very simple. The sender deposits money in an account of the branch or an agent and gives the basic information of the receiver and then obtains a transaction number, which is required for the receiver when he/she takes the fund at an agreed time. Compared with other financial institutions and banks, the primary benefit of these MTO (most of them) is that clients are not compelled to show identity cards, which enables migrants in any legal status to use their services.

- *WU*

WU is a leading and largest global player on the market for remittance with more than 150 years of history. Its' main business is global money transfer, payment and repaid services. WU has approximately 435,000 agent locations in 200 countries and territories<sup>14</sup>. Intercash s.r.o represents WU financial service in the CR since 1995. Thanks to contracting representatives, Intercash s.r.o builds up high density of network service in the territory of the CR. The Czech post office, the travel agency Čedok, a network of hotels EuroAgentur Prague, Legner and OREA, a network of money changers Interchange, Exact Bohemia and many others are the representatives of Intercash s.r.o.

The price of the WU service is generally considered expensive. Migrants use this service only when their relatives need money support urgently or when they want to send a relatively large amount of money. Nonetheless, WU transfer process usually takes only 15 minutes to everywhere where the branch exists and charges less percent fee for the large amount of money. Also WU is considered as less document required MTO. The following details are required for the senders:

- The recipient's name and detailed information
- Destination country

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<sup>14</sup> Source: [www.corporate.westernunion.com](http://www.corporate.westernunion.com)

The following details are required for the recipients to pick up money:

- The sender's name
- The expected amount of money
- Place and country of origin
- Money transfer control number
- Control question and answer <sup>15</sup>

- *Chequepoint*

Chequepoint and its partners are currently active in 77 countries and offer a range of financial and tourist services including international money transfer and foreign exchange. The company was founded by Felix Grovit in 1974 in England. It has over 35 years of history in international financial services. Chequepoint a.s was founded in 1990 and currently has 29 branches and more than 70 subcontractors (agents) throughout the CR<sup>16</sup>.

The company has interesting management and plays a significant role in society of Mongolian and Ukrainian migrants. Most of the agents of this company are foreign translators, who have access and a lot of respect in their communities. For instance, the head of the Mongolian Community in the CR is an interpreter of Mongolian-Czech language and he is an agent of Chequepoint a.s. Recently, the company Chequepoint has become most demanded and trusted MTO among Mongolian migrants, thanks to attractive teamwork with head of community and other interpreters, who have commanded a lot respect of other migrants.

### ***Unofficial RSPs***

Sending money via friends, relatives or courier (bus driver, passengers from same country) is the traditional, natural and easiest way of remitting. We will consider this type of transfer as informal way of sending funds. According to our survey, many migrants are likely to use formal than informal ways of sending money. Basically this is related to the advantage of the

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<sup>15</sup> Source: The Czech post office web page, <http://www.cpost.cz/en/sluzby/penezni-sluzby/zahranici/western-union-id27735/>

<sup>16</sup> Source: [www.chequepoint.cz](http://www.chequepoint.cz)

method itself. Nearly zero transfer cost (usually they do not pay friends or relatives for caring money to home country) and no communication barrier (as they use the same language with people from their country of origin) are the advantages of this type of remitting.

Moreover this is a very natural and traditional way of remitting because money is sent through someone, who is traveling to his or her country of origin and it is evidently easy. In reality or at least for Mongolian migrants, it is not difficult to find someone who goes to their home country thanks to well-built connections established between them (meetings, web-sites of Mongolian communities, special phone service for Mongolian people, Mongolians have access to call each other without paying etc.).

### ***A combination of formal and informal ways of sending money***

Due to language barriers and other legality problems, some migrants ask their friends, relatives or someone who is fluent in given language to send the money home on their behalf. For someone who is fluent in foreign language for example the Czech language can easily remit a certain amount of money in place of their friend or relative through RSPs and this saves times and it is less risky. In addition not every migrant has correct documents as required by RSPs and so the only way to send money is through their friends and or relatives. Usually the friends or relatives through whom other migrants send the money are paid for providing this kind of service.

## **2.3 HOW REMITTANCES ARE MADE**

We already know that the senders, receivers, and RSPs are the main effective participants in remittance transfer. Generally, we can divide RSPs into two divisions according to their function at the moment of remitting. The capturing RSPs are the RSPs that operate in countries where the sender is based and disbursing RSPs are the RSPs which are located in countries origin where the receiver is situated. Both the capturing and disbursing RSPs are responsible for providing good quality of service. If these RSPs cooperate accurately, service transfers will be effective and the expenses will be small. RSPs do not often use their own offices and branches with the purpose of providing the service. Sometimes they use their agents with the assistance of other people (Chequepoint's case) these agents receive and distribute funds to others. Only few

companies have their own infrastructure at global level. WU, MG, Paypal and the Xoom are some of the global leaders with high density of international network offering this service field.

Basically saying, remittance transfer process consists the following two parts:

*Visible part* – These visible parts of the service are carried out at the beginning and at the end. In other words, these are the capturing and disbursing processes. The sender pays the capturing agent and the disbursing agent pays the receiver<sup>17</sup>. This process can be done in several ways i.e. by cash, by debiting and crediting a bank account or by prepaid electronic money and so on.

*Less visible part* – This is the whole course between capturing and disbursing processes in which proceed messaging and settlement<sup>18</sup> procedures between RSPs and their agents. The speed of these procedures influences the speed of whole transaction process.

## 2.4 TYPES OF REMITTANCE SERVICES

In order to offer remittance services one needs a certain type of network and an access point. The access points for receiving and sending the funds could be owned by the RSP itself or its agents. According to the WB in its publication “General principles for international remittance services, 2007”, the remittance services can be classified their access points’ realm (domain) and magnitude of their network, as unilateral, franchised, negotiated, and open network categories.

### *Unilateral services*

This type of service is mainly revealed by an initiated network based on its own property. RSP is able to offer service regardless of other agents. It is possible in the following two cases: -

1. If the RSP has its own physical access points in both countries (sending, receiving)
2. The network is a virtual. That is to say the access points are not agents but communication apparatus. For example, PCs with Internet access or mobile phones etc)<sup>19</sup>

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<sup>17</sup> Source: Committee on Payment and Settlement Systems and The WB, General principles for international remittance services, Pg 8, ISBN 92-9131-732-2, 2007

<sup>18</sup> Messaging arrangements enable information about the remittance to be passed from capturing to disbursing agent and settlement arrangements enable the funds themselves to be moved.

<sup>19</sup> Source: Committee on Payment and Settlement Systems and The WB, General principles for international remittance services, Pg 9, ISBN 92-9131-732-2, 2007

Disadvantage of physical access points is their limited availability. This is a result of economic and organizational difficulties occur in placing enough numbers of agents in every country. The services based on virtual networks will be very successful in the future, at least in developed regions. At the moment good examples of unilateral services are services provided by global banks. These banks set up their branches internationally and have access to many developing areas where migrants come from.

### ***Franchised services***

If central provider offers remittance service without any necessity of its own access points it is called a franchised service. Creating its own infrastructure is enough for central provider by inviting the agents from sending and receiving countries. In other words, it makes decisions by offering them franchising service. Big representatives of this type of service are businesses that offer global money transfer operations and international credit and debit card services.

### ***Negotiated services***

In a negotiated service, an RSP creates its own access points by negotiating with a certain numbers of organizations in other countries. One of the examples is mutually negotiated service between banks, credit unions, hawala<sup>20</sup> services or schemes established by postal organizations. It can also be understood as a mutual negotiation among large non – competing or limited competing organizations concerning their own products.

### ***Open services***

RSP provides its service to the customers by collecting funds using its own network and access points and distributes the funds using any open network. Currently this type of network is international banking networks and that is the most common type of remittance service for banks. This network has the advantage of providing a chance to transfer from any bank, which offers a cross – border service, to another bank anywhere in the world.

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<sup>20</sup> A hawala service is a remittance service provided by an individual (rather than an incorporated entity).

## 2.5 THE MEANS OF MIGRATING AND SENDING MONEY TO HOME

As a result of migration, the country where migrants come from gain income and the country of their new residence gains cheap work force. Robert Stojanov (Faculty of Regional Development and International Studies, Mendel University in Brno) points out that international migration is the main diminishing factor of socio-economic differences between developed and developing regions<sup>21</sup>. Migrants earn money in developed countries with high-income and price level and then they spend their funds in developing countries with low income and low price level by sending remittance or by themselves when they return to back home.

Money is only one side of the advantages they obtain from migrating. There are lots of merits they could bring to their home country. For instance: good qualifications, high education, profession in new technologies, and knowledge from scientific accomplishments. Hence migration is one of the effective ways of enhancing international development.

There are two factors that help to create international migration flow, push and pull. Push factors are for example poverty, lack of freedom, natural disasters, unemployment, political fear or persecution, economic crisis and so on. Pull factors are better living conditions, family links, job opportunities, foreign TV programs and movies, entertainment and consumer goods sold on local markets<sup>22</sup>.

For the Mongolian migrants push factors are playing more significant role. Due to political instability, unequal wealth distribution and weak economic policy, Mongolian residents are leaving their home and immigrating to other developed countries in last two decades. Indeed, the flow of money from migrant workers back to their home country is an important source of house income in many developing countries including Mongolia. Mongolian unofficial sources inform (there is no official data base exist yet) that a total of 150 thousands of migrants live outside of the Mongolian border. If it is true at least 20 percent of our population somehow supported by their remittance from abroad.<sup>23</sup>

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<sup>21</sup> Source: The study "Labor migration" the project of the "CSO Development Effectiveness", presentation "The development potential of remittances", (23.06.2009) available at [http://www.migration.ucdavis.edu/mn/more.php?id=3517\\_0\\_5\\_0](http://www.migration.ucdavis.edu/mn/more.php?id=3517_0_5_0), (28.08.2010)

<sup>22</sup> Source: Asia-Pacific Journal of Social Sciences, Vol.1, Jan-June 2009, pg 84-86, available at: <http://www.socialsciences-ejournal.org/6percent20Gurusharanpercent20Sing.pdf>, (10.12.2010)

<sup>23</sup> Here, I assumed that an average 3-4 people stayed behind one migrant. That means about 450-600 thousand people, it is around 20percent of all population depend on remittance transfer from their relatives in abroad. Mongolia has 2.7 million residents.

The Mongolian recipients are usually highly dependent on remittances from their relatives in foreign countries, in case CR. The flow of remittances is the main financial source of most recipients at home and that source of money usually covers their day-to-day living expenses and sometimes it could be accumulated for additional funding of small businesses.

## **2.6 SURVEY ON REMITTANCE MARKET IN THE CR**

In last two decades, due to weak economic condition, Mongolian residents have been immigrating to other developed countries. The main destination countries of Mongolian emigrant workers are: the USA, Germany, South Korea, Japan, England, Hungary, CR, United Kingdom, France, Turkey, Switzerland, Austria, and Poland. (Source: UNPD, Development prospects Group)

CR has become one of the most attractive destinations to Mongolian emigrants since 1998. The total value of remittance over the past 10 years has been increasing steadily from the CR to Mongolia due to incensement in number of migrants. Yet there are still no detailed records in both sides of statistical and financial institutions, remittance flows have been increasing on a yearly basis.

Just last year in 2009, the CR Ministry of Finance requested from the Payment Systems Development Group of the WB to provide a plan for implementation of some of the main activities with the highest potential to enhance the efficiency, reliability, transparency and effectiveness of the national market for remittances.<sup>24</sup> At first Czech authorities decided to fund the undertaking of a national Survey on the Market for Remittances within seven countries that have the highest numbers of migrants in the CR namely Slovak Republic, Ukraine, Vietnam, Poland, Russia, China, Moldova and Mongolia. The survey was taken by officials from their embassies and individuals from the above mentioned countries. I was one of them and, I conducted the survey among the Mongolian migrant workers.

I have available 110 questionnaire results based on 26 sub questions. The survey covered a wide range of topics including, demographic aspects, access to financial services, and remittance services procedure of migrant workers.

According to survey requirement, we had to follow several rules such as:

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<sup>24</sup> Source: Czech national survey on the market for remittances

- 1) All the interviews were conducted person to person;
- 2) Interviewees were selected randomly, according to statistically validated sampling method.

### **Sampling method**

Individuals to be interviewed were selected randomly in order to ensure that the sample would not be biased. Two filter questions were included in the questionnaire in order to detect only migrants: a). from the selected nationalities, b) who sent money to their home countries.

The interviewers were instructed to attempt surveying every third person passing by their designated location, counting only passersby who could be from the nationality of interest. If the selected person declined or did not pass one of filter questions, the interviewers would ask the next person they thought could come from the country of interest. Then, the interviewers would resume asking every third person. The number of people counted before selecting the interviewee was adjusted for low-density locations, where the interviewer could stop each second person.

*(Source: Marco Nicoli and Carlo Corazza "The market for Remittance Services in the CR" ISBN: 978-0-8213-8585-2)*

## **3. THE OUTLOOK OF THE CZECH REMITTANCE MARKET**

The aim of this part is to describe remittance market structure and mechanisms and also to determine the key factors that create inefficiencies in the market for remittances in the CR by using data from the survey on remittance market services in the CR. Furthermore, I will take attention on characteristics and functioning of Czech-Mongol remittance corridor and specification of Mongolian migrants' remitting behavior and their actions on the related market.

### 3.1 DATA

The empirical analyses reported in the following 2 parts of the thesis are based on data from survey “Czech National Survey on the Market for Remittances” in year 2009. The survey was undertaken by the Payment System Development Group of the WB and Ministry of Finance of the CR. It was conducted in areas (mostly in Prague city) identified with high immigration rates among eight largest migrant communities in the CR. The nationalities selected for the survey are China, Moldova, Mongolia, Poland, Russia, Slovak Republic, Ukraine, and Vietnam.

The data used for following analyses are collected by among Mongolian migrants in the CR. The survey interviewed among Mongolian communities in or out of areas of Prague, who where in the 20 to 51 age group category. As noted in previous part, the survey covered a wide range of topics including, demographic aspects, access to financial services, and remittance services procedure of migrant workers. Nevertheless, the survey data hasn't completed in all areas. For example, the data has no evidence on the issues related to households of migrants and potential recipients of remittances. But data does contain detailed information on migrant themselves, and this allows for an investigation of effects of various factors on migrant's remittance behavior.

The questionnaire form contains 26 questions with multiple choices of answers including information about the amount of money sent home, the frequency of sending money, the cost paid for remittance services, the used MTO (Money Transfer Office), the length of complete transaction, the gender and the age of people, type of employment, type of working sector, the length of stay in CR, monthly income, the legal status of the migrants and so on. (*See the questionnaire form at the appendices*)

## **3.2 THE MARKET FOR REMITTANCE SERVICES IN THE CR**

Whatever service is used in the market, the main goal should be constructing well-organized market structure and providing an efficient services. However, there are many explanations about efficient and inefficient market, its structure and services. We could understand inefficiency in the market as the price of the remittance service is higher than it should be.

In this part, I'll focus on factors which may create inefficiency on remittance services in the market for remittances. In general, according to the book published by WB, following five factors cause the market for remittances to offer inefficient services:<sup>25</sup>

1. Lack of transparency in the market and consumer protection
2. Weakness in the payment system infrastructure
3. Weak legal framework and negative effects from poor regulation
4. Market structure and lack of competition in the market
5. Governance and risk management

Nonetheless, in this bachelor thesis framework we will take into account 1, 2 and 4 factors and accordingly we do some analyses on Czech remittances market based on survey statement.

### **3.2.1 The Service Transparency and Customer Protection Level in the CR**

#### **The service transparency**

The one of the main factors that makes transparent environment to remittance service is detailed information about the service. Clearly provided information may assist customers to make a right decision for using services. The speed and the total price of the services depend on how remittance service is related to transparency and reliability.

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<sup>25</sup> Source: Committee on Payment and Settlement Systems and The WB, General principles for international remittance services, Pg 10, ISBN 92-9131-732-2

- *The speed of the service means the total spent time until the fund reaches the receiver.*

As I already mentioned in the first part, the speed of both messaging and settlement processes influence the speed of transaction process. Therefore the speed of transfer related to which type of service is used. The information about duration of transaction can be seen in unilateral, franchised and negotiated services because the settlement process is standardized. Mostly, it is known easily in unilateral and franchised services. For these two types of services, duration of transaction is usually about one day.

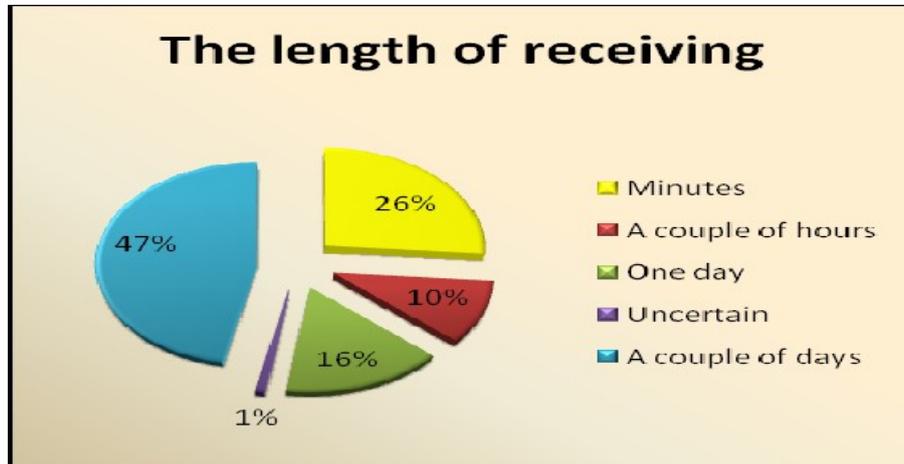
For the negotiated service, however transaction process is mainly uncertain RSPs can offer some fixed standard of time. In this case, the capturing agent makes a certain contract with disbursing agent. On this contract, it is made more precise to give the funds to the receiver since the disbursing agent receives information about the transaction immediately or in a certain time. The transaction process is done usually within a day in negotiated services. In case of an open service, there isn't any direct contract between RSPs to influence each other. Therefore any agents are not able to influence the speed of the transaction. Thus in this type of service, the transaction tends to be very slow.

It was already mentioned the speed of transfer service is certain for unilateral and franchised types of services and can be known in negotiated service. As reported by WB latest study "The market for Remittance Services in the CR", the Czech remittance market relies mostly on seven main MTOs and most preferred MTO among migrants was the WU followed by Chequepoint. According to my previous experience on survey I would say, this information is quite exact and if it is so, for the CR most used or most preferred MTOs are in types of known speed of service.

Therefore, Czech remittance market is could be transparent in standpoint of possibility to know transfer speed. A subsequent graph gives an idea about how much the Czech remittance market is related to transparency with the view of transfer speed. When interviewees were asked to tell how long they should wait for transfer to be delivered to get the recipients only about 1 percent of interviewees answered that the information about length of receiving fund is uncertain. This confirms the clear confidence about transaction speed or the length of receiving fund.

As illustrated in the Graph 1, almost half of the fund receivers get paid within 2-5 days according to our survey result. Sector highlighted in yellow represents most quick transfers with

minutes of speed. This means transaction can be completed within a couple of minutes. Probably, it can also represent a share of WU and MG services among the MTOs in the CR.



Graph 1: The length of receiving fund, source: author's work

Approximately 63 percent of all transactions are done in days and other 36 percent completed in couple of hours or minutes. Some migrants argued that they faced with delay problem very often. However, this is not directly related to the service defect of RSP. While RSP in the CR has only certain agents or direct offices in several big cities of Mongolia to which RSP transfers money. In cases when the recipient lives remote disbursing agent in Mongolia resend the fund via domestic banking services locating in the hometown or recipient. Thus it takes more time than migrants' expectance and also reason of the unexpected additional expenditure from the receiver. Nonetheless, usually there is not exact written information about speed of the service in the remittance transfer offices. Migrants usually told how long they should wait for until fund is ready to be paid.

- *The total cost of the service means price of the service plus all kinds of the deductions and service taxes.*

In most cases certain fees are charged by the capturing agent but in some cases, the disbursing agent also charge additional fees and certain amount deducted as a tax.

Therefore, if customers have enough information about the services, that can be the basis for choosing a right service. Different MTS providers have different service prices. This usually depends on the evidence that price of the remittance service fluctuates according to variation of

several variables such as: adjustment of tax percentage, remittance amount sent, exchange rate and so on. Here also pressures the additional fee which is charged by the disbursing agent. Therefore it is important that the customers should pay attention to above mentioned factors for understanding the price differences. Let's consider on two of these factors more detail in case of CR.

➤ *The exchange rate*

Foreign currency exchange rate always influences on remittance transfer. Basically it is the expense of the conversion from the currency of the sending, receiving country or to the commonly accepted foreign currencies. Understanding the exchange rate is prerequisite to the study of price of transfer completely. RSPs don't use the same exchange rate and that is one of the reasons for their service prices are different. In practice the exchange rate is mainly deducted from senders and the rate is higher than the market rate as well as the normal exchange points. Thus the higher exchange rate may influence price level. Interestingly, higher level exchange rate posed by RSPs was not the biggest problem among Mongolian migrants. In order to decrease the cost of the service provided by MTOs, the migrants usually convert their money into the currency being sent at a reasonable rate elsewhere to using the MTS. The most commonly used currencies are the USD and EUR. Approximately 90 percent of all transfers are made in the USD. Thanks to the availability of selection of these currencies in both capturing and disbursing MTOs, Mongolian migrants have been transferred without outsized exchange loss.

Mongolian currency, "Tugrug" (TUG) is converted to the USD at a rate between \$1~TUG 1200-1400. TUG is relatively weak currency and its exchange rate against other currencies enormously depends on the fluctuation of USDs in the currency market. Furthermore, Mongolian currency market is poorly developed and there are few currencies available at exchange offices. In other words, USD is the main foreign currency on the foreign currency market in Mongolia. Therefore, for the Mongolians it is important to pick a right moment in which both rates X (any third country's currency, in a case CZK) to USD and USD to TUG reach at profitable level. If a migrant wants to send money at a lesser exchange loss then he should find a moment when exchange rate of USD is weaker in the CR and stronger in Mongolia.

➤ *Fee charged by the disbursing RSP*

The ability of an RSP to be transparent depends on characteristics of disbursing RSPs and the level of information disclosure about their services fees. Depending on the type of RSP the availability of information on service fees are different and to a certain level it is also unclear to the RSPs at a different stage of transfer process. For example as per the franchised and negotiated services capturing RSP has the advantage of being fully informed about the fee that is being charged by disbursing RSP. In doing so, customers are able to know the total fee earlier and count in advance.

As we know from the previous chapter, the unilateral services has provided by single RSP without involving other disbursing and capturing agents. But for the open services this is absolutely opposite. Because of the differences between disbursing and capturing RSPs, capturing agent is not able to know about how much fee is charged by disbursing side. In this case it is common that disbursing and capturing agents do not have contracts signed between them. Thus the disbursing agent inevitably needs to charge a fee as they don't to receive income from the provided services.

As I mentioned before, Mongolian migrants mainly use franchised and negotiated types of RSPs and many of them haven't confronted with additional fees in accordance with our survey. Only two of 110 people answered that they have had a problem with additional payment during transaction but after our discussion it came clear that this was not actually additional fee of the disbursing agent. Migrants were coming from country side of the Mongolia and disbursing agent was located in capital city. Therefore, disbursing agent used local bank branch to transfer these funds to the country side. Obviously, bank has charged the receiver a certain fee.

### **Customer protection**

One of important issues that make market for remittances to be transparent is the customer protection. The customer protection is very sensitive issue within migrant communities. The migrant worker who came from a poor developed country isn't able to discuss about this subject in most cases because of lack of knowledge on their rights and language barrier, for instance.

In my point of view, there are two types of motives that make customer protection self insufficient. These are interior and outer causes. Interior causes represent problems related to access to the services whereas outer issues can address the destination country's customer protection level.

### *Access problems*

Access problems usually arise from sender's social and economic status. For instance, low-income people in a foreign country mainly can't speak a given country's language. This reduces the possibility of investigating and usage of remittance services. Furthermore, some migrant workers are not able to complete documents which are required by the MTO to be filled in due to their legal status. These reasons limit the possibility of comprehensive usage of remittance services and require a second person in order to have an access to the services. As a result, they tackle with many problems related to remitting fund such as loss of money, additional charge, and incorrect amounts received etc. Once they have a conflict of documents, they aren't able to access the juridical and police offices and endure financial losses.

Financial literacy is the most common problem for migrants even when they have all related documents at hand. Without any knowledge of financial literacy or language, it might be difficult to find that alternative services which is more suitable and affordable for them. Thus their choices among remittance services are restricted to few MTOs and services.

Even so during the survey when migrants were asked to list what problems they had in the past when they sent money, delay problem commonly occurred among migrants as you see in the following table 18 people of 110 participants (*See Table 1*). It has been confirmed that in some cases delay problem occurred due to second person who plays in intermediary role for access to the services.

**Table 1: Most occupied problems during remittance transfer (the numbers count how many time this problem come out),**  
Source: Author's work

<b>The fund was not received</b>	<b>0</b>
<b>The sum received was not correct</b>	<b>1</b>
<b>The money arrived with days of delay</b>	<b>18</b>
<b>The receiver had to pay a fee to withdraw the money</b>	<b>2</b>
<b>Other problems</b>	<b>0</b>

### **3.2.2 Payment System Infrastructure**

Another important issue of the market for remittances is a satisfactory payment system infrastructure to support the activities of remittance services. RSPs mostly use their own facilities or existing infrastructure in receiving and sending countries to provide their services.

According to WB analysis, the payment system infrastructure of the CR is well developed and access points are broadly reachable. For instance there are 3377 (in year 2009) branches of post office, 29 branches and more than 70 subcontractors of Chequepoint a.s. throughout the CR. As stated in book “The Market for Remittance Services in the CR” the Czech remittance market relies mostly on seven main MTOs with nearly 1,300 collecting and disbursing points. Besides that banking networks are also widely available in the territory of the CR. In 2008, there were 1994 commercial bank branches in the CR<sup>26</sup>. Also there are many more MTOs with numerous of branches functioning to provide remittance services. In some cases, credit unions and foreign exchange offices provide remittance services as disbursing and capturing agents.

In contrary to the CR, Mongolian payment system infrastructure is underdeveloped, and remittance collecting points usually locate in urban areas. Market players are mostly commercial banks and their branches. Non banking participants have played micro role in this sector without considering the illegal channels. Entirely 14 commercial banks provide financial services but only 4-5 banks have the most important positions in cross border payment transfer area. We will talk about those banks in more detail later.

Certain problems might occur in following three main areas while creating payment system infrastructure. Therefore, we should concentrate more on these areas.

#### *1 Creating a network of access points*

For RSPs, one of the confronted issues is creating a network to the access points and connecting them for providing a legally responsible remittance services (capturing agents and receiving agents and procedures for settlement/messaging)<sup>27</sup>. Actually, creating a network is likely to be the most difficult issue in this sector. Unilateral, franchised, negotiated, and open services have both advantages and disadvantages regarding this aspect.

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<sup>26</sup> Source: Marco Nicoli and Carlo Corazza, *The Market for Remittance Services in the Czech Republic*, Pg 12, ISBN 978-0-8213-8585-2

<sup>27</sup> Source: Committee on Payment and Settlement Systems and The WB, *General principles for international remittance services*, Pg 14, ISBN 92-9131-732-2

For unilateral services, depending on the distinctions of service providers, this type of RSPs have limited relations with qualified banks which are able to offer services to wide range of area and in specific countries where network and infrastructure are not well developed. Although the remittance services based on the internet and mobile phones have become more popular and it has reduced the need for physical access points therefore simplifying the unilateral services in future. But for now this type of services is still limited for most senders and receivers.

On the contrary, for open services, they offer a service which is based on the international banking networks that already exist. Once the network has been created, franchised and open networks enable the easiest market entry for new RSPs. And for any RSPs, they are able to offer services using open networks by opening an account for the purpose of offering remittance services. For negotiated services, it is not easy to find suitable partners in other countries to cooperate and successfully negotiate with them. Due to insufficient number of reliable partners this service is provided within a limited territory and it also implies to a franchised service. Until sufficient agents are created they will prefer to carry out their services within their scope.

The RSP Company “Chequepoint a.s.” is a good example of negotiated service in Mongolia. Chequepoint doesn’t have any branch in Mongolia but the company cooperates with Mongolian company “Blue Diamond” ltd in order to provide services. The weakness of this service is of course limited scope of disbursing agencies. As I found, the “Blue Diamond” has three main branches in the capital of Mongolia and another two in major two cities, in total five branches disbursing funds in whole country territory.

As compared with “Chequepoint a.s.”, WU employs sufficient numbers of access points in Mongolia. WU cooperates with the biggest Mongolian bank “Khan Bank” which possesses the largest network in the rural area of Mongolia.

## *2 Financial infrastructure*

It is usually the case when financial system and infrastructure are underdeveloped in receiving countries (developing countries). Especially in rural areas, many receivers face with problems because of inadequate numbers of physical access points. Although there are agents who offer services in rural areas disbursing agents process slowly due to underdeveloped domestic infrastructure and geographical distant from the receivers. The problems mostly affect the speed of the transfer.

In case of Mongolia people have to travel a long distance when they are to receive or send fund elsewhere as the country is dispersedly populated: About 30 percent of Mongolia's 2.7 million people live in nomadic or semi nomadic life style throughout 1.5 million km<sup>2</sup>. It is too costly for banks to establish branches and maintain them. Only few dominant banks provide transfer services throughout the whole provinces including most of s $\ddot{u}$ m<sup>28</sup>. Generally saying, banks dominate in Mongolian financial sectors. There are 4-5 chief banks whose financial network is potentially developed in most regions of Mongolia. For example:

“Khan” Bank is the largest bank with 500 branches across the territory of Mongolia. As of 2009, 100 percent of the Bank's branches were operating on a real time basis providing customers with direct access to all banking services from everywhere in Mongolia<sup>29</sup>.

“Golomt” Bank is the second leading bank in Mongolia managing around 23 percent of the assets of the domestic banking system<sup>30</sup>.

“Savings” bank is the third largest bank with 310 branches across of all area of Mongolia<sup>31</sup>.

“Khas” bank is the county's fourth largest bank with a nationwide network of 78 branches and settlements<sup>32</sup>.

“Capitron” bank, as of today, the bank carries out its operation with 17 branches and settlement centers in Ulaanbaatar, Erdenet, Darkhan city and Bayan-Ulgii province, the country's main economic regions<sup>33</sup>.

These banks have already established internet banking, mobile banking and international plastic card services. Especially, mobile banking service can be most accessible in Mongolian market and its base already available even in the remote ranch herder. To draw conclusion, the level of financial infrastructure is potentially developed for the remittance services, especially for banks.

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<sup>28</sup> A s $\ddot{u}$ m is second level administrative subdivision of Mongolia. The 21 provinces of Mongolia are dividing into 329 s $\ddot{u}$ ms.

<sup>29</sup> Source: Khan bank official web site, <http://www.khanbank.com/en/35/About-Us.html>, 07.04.2011

<sup>30</sup> Source: Golomt bank official web site, <http://www.golomtbank.com>, 07.04.2011

<sup>31</sup> Source: Savings bank official web site, [http://www.savingsbank.mn/index.php?module=menu&cmd=content&menu\\_id=198](http://www.savingsbank.mn/index.php?module=menu&cmd=content&menu_id=198), 07.04.2011

<sup>32</sup> Source: Khas bank official web site, <http://www.xacbank.mn/en/90/about-xacbank/introduction>, 07.04.2011

<sup>33</sup> Source: Capitron bank official web site, <http://www.capitronbank.mn/webclient/web?mbtype=1&mbid=1484&mblang=24>, 07.04.2011

On the contrary, Non Bank Financial Institutions (NBFI) have very a low participation in this sector due to consequent crises on financial market between “1993-2002” during which many of NBFIs had bankrupted. It has also been revealed that those institutions were used for money laundry which resulted in loss of savings of individuals thus reducing the customers’ belief in NBFIs.

In some circumstances, NBFIs may have potentiality to increase their role in the market for remittances in Mongolia. During my interview with migrants, I was frequently asked if there is a possibility to deposit their funds in a saving account at a financial institution without involving a third party who currently receives money from them and then deposit their money at a bank in Mongolia. Mongolian banks are not able to provide this kind of services and are reluctant to open an account for migrants who are not able to visit the offices themselves. It illustrates an opportunity for NBFI if they could cooperate with foreign MTOs like Blue Diamond Ltd and Chequepoint a.s and then offer direct deposit services with guaranteed savings to customers.

### 3 *Cross-border payment arrangements*

The trans-frontier links between domestic payment arrangements of different countries are importantly needed for settling remittance transfers and it is one of main aspects of the infrastructure of remittance services. These links are in most cases established/ provided between banks/ by banks of the different countries. Consequently it is suitable for large amount of transfers and less comfortable for retail payments such as remittances because of expensive processing.

A particular problem here is the different message formats which are used in different countries or in different systems that make remittance transfers slow and difficult. The WB appealed to the banks to achieve cheaper, automated straight through processing by accepting standardized, generally used formats, or formats that can be easily translated.

Therefore, it is proper to use internationally agreed standards instead of their own one. However it can be expensive to establish these standards it definitely has a positive impact on making cross-border payments easy and fast. Furthermore, as the transaction increases the cost of incurred will be recovered in the future.

An alternative way to create banking network is making a direct link among payment systems. According to WB, following three fundamental items have to be tackled to create those links:

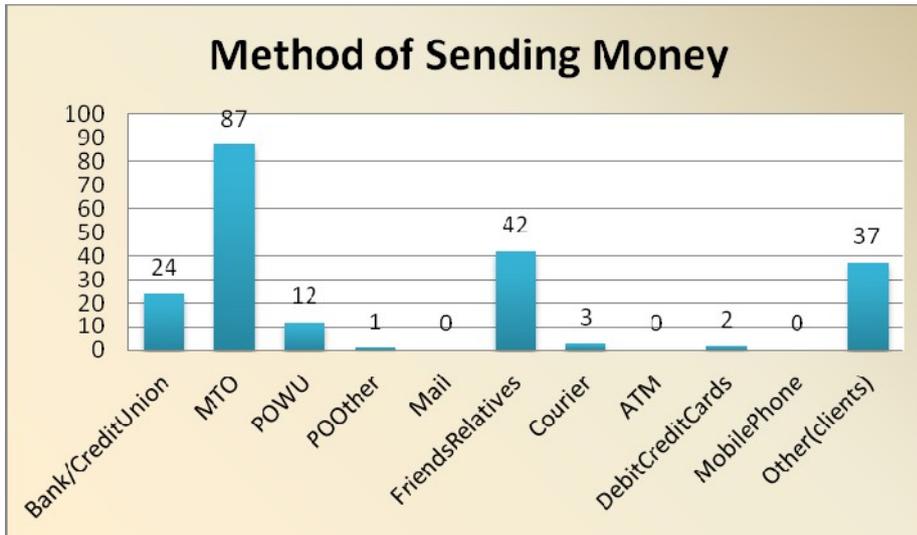
1. Message formats standardization: - It makes easy and automated translation between participants.
2. To create an agreement about the exchange rate conversion: - In a need of exchange of currencies, both sides have to have certain agreed level or method of exchange rate in which one currency converts to another.
3. To establish settlement arrangements: - an agreement about when and how remitting fund should be sent.

### **3.2.3 Market Structure and Competition**

The efficiency of remittance services depends on how well developed the competitive business environment is in the market. The more competitive business environment developed the better and affordable services will be offered. As we know from the previous section the Czech remittance market relies mostly on seven main MTOs and most preferred MTOs among migrants were the WU followed by Chequepoint. According to our survey it was also confirmed that for transferring the remittance fund Mongolian migrants are more likely to use MTOs. Also individuals privately engaged in transferring money or people who are traveling to the country of origin were most commonly used as remittance transfer service. Other methods such as transfers via bank, credit union, post office, and ATMs are much less popular.

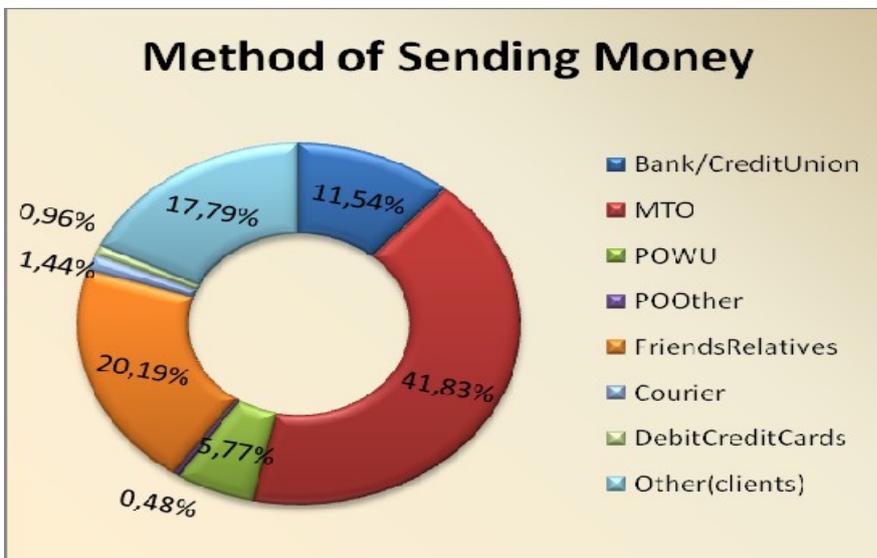
As illustrated in Graph 2, Mongolian migrants send money mostly via MTO. Totally 110 migrants answered to a multiple choice question “Which is your preferred method of sending money home?” MTOs were indicated for most preferred method with 87 votes, followed by method “friends and relatives” with 42 votes.

In addition, some of these methods for example ATM, mobile phone and regular mail are unused or unknown among the Mongolian migrants.



Graph 2: Migrants' method of sending money to the country of origin. Here "POWU" stands for the Post Office with WU, "POOther" is other transfer services of the Post Office, "Courier" stands for bus driver or someone who travels to the home country (they usually charge some amount of fee for offered services) and "Clients" are individuals with the licenses who provide remittance service. Source: Author's work

In the following graph, above information is illustrated by doughnut chart that 42 percent of Mongolian interviewees generally indicated MTOs as most preferred method sending money home.



Graph 3: Migrants' method of sending money to the country of origin. Here "POWU" stands for the Post Office with WU, "POOther" is other transfer services of the Post Office, "Courier" stands for bus driver or someone who travels to the home country (they usually charge some amount of fee for offered services) and "Clients" are individuals with the licenses who provide remittance service. Source: Author's work

The method "relatives and friends" has a bigger share and is usually considered as an unofficial way of sending fund. More interestingly, banks and credit unions are not favor of

interviewees. The share of its value is less than 12 percent which confirms the scarce relevance of banks in the remittance market in the CR. It also means that there is a low competition in the market for remittances in the CR. Also WB and other studies have also confirmed it (*see Marco Nicoli and Carlo Corazza, "The Market for Remittance Services in the Czech Republic", 2010; Blanka Tollarová and Tereza Rejšková, "Sending Remittances from the Czech Republic to the Country of Origin", 2009*). For example, WB noted that some RSPs clearly occupy a position of supremacy in the market. The scarce relevance of important players such as banks and the post office is not favoring competition in the market.<sup>34</sup> Moreover, they also pointed out that wide range of informal channels such as relatives and friends make the market less attractive for RSPs.

## 4. EMPIRICAL ANALYSIS

In this section data is used to analyze the determinants of remittances for the Mongolian communities in the CR. The data is described in Part 3, section 1. I will attempt to explore the factors among available dataset that account for variation in remittance flows. Furthermore, the analysis here is concerned with the effect of various factors (determinants) on Mongolian migrants' remittance behavior.

### 4.1 THE EMPIRICAL VARIABLES

Table 4 shows the dependent and the independent variables which can be used in our analysis, and contains selected summary statistics.

[Table 4, see it in appendices]

The dependent variable and some of explanatory variables which interpret the value of income, cost and remittances are all expressed in US dollars. Among those who were interviewed in the survey, the average value of remittances is about USD 350 with frequency of 7 times per year. Total of 13 variables are considered in the regression model and these variables were chosen

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<sup>34</sup> Source: Marco Nicoli and Carlo Corazza, *The Market for Remittance Services in the Czech Republic*, Pg 28, ISBN 978-0-8213-8585-2

based on previous experimentations of the related empirical studies and availability of dataset. Literature base of this part is basically supported by Jorgan Carling's research paper "The determinants of migrant remittances", (2008).<sup>35</sup> In his paper, Carling concluded the micro-economic determinant factors to the remittances based on more than 40 empirical studies of determinants of remittances.

Chosen variables are described as followed:

### ***Characteristics of individual migrants***

Our empirical model includes two dummy variables (age and gender) which represent characteristics of an individual migrant. According to Carling (2008), individual characteristics of the migrants, such as educational attainment, gender, age and ethnicity are the first determinants why they behave differently, some send more frequently and higher amounts while some send less frequently or do not send any. Particularly, migrants' age has more consistent impact on remittance sending and furthermore this factor has positive effect on remittances. While as Jorgen noted, gender differences in remittance behavior are not always statistically significant, but when they are, men are generally more likely to remit, and remit larger amounts.

In my point of view, ability to work and save money is should altered by the age of migrants which also influence the remittance value. A younger worker spends more money on themselves such as clothing, sport and entertainment but at the same time they are able to work for more hours than the older ones. On the other hand, older migrants have a certain amount of savings and experience on the work also they are not likely to spend money for themselves; therefore it is natural that older aged migrants tend to send larger amounts of money than younger age groups. But relationship can be reversed at a certain age level, let's say middle age, because their life becomes are more centered around themselves as they will have their own family and desire for more comfort.

On the other hand, it has been observed that migrants are likely to be male because of work sectors they are capable to work are more. Besides, the salary of the female migrants (≈USD 619: average salary of the Mongolian female migrant, based on our survey outcome) tends to be less than that of the male migrants (≈USD 640: average salary of the Mongolian male

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<sup>35</sup> Source: Jorgen Carling, Oxford Review of economic policy, Volume 24, Number 3, 2008, pp.582-599 'The determinants of migrant remittances'

migrant, based on our survey outcome) per month. As a result men could send more money than women but women take care of their families better than men. I wouldn't therefore expect any relationship based on this knowledge.

### ***Employment status of the migrants***

Variables related to the employment status of the migrants for instance, working sector and type of enterprise in which the migrant works are directly linked to the educational attainment of the migrants and it has definite impact on income level of them. Therefore, these variables should have significant effect on remittances. The level of income particularly depends on the type of employment across various sectors and educational base of the migrant themselves. For instance, most of Mongolian migrants tend to be unqualified for specialized jobs and they usually work in manufacturing, construction and agricultural sectors for relatively lower wage than average salary in the country. Their gross salary ranges between 8000 to 15000 CZK per month. Nevertheless, migrants who work in Information Technology, scientific and technical fields have much higher earnings.

In our study, the type of enterprise is divided into four categories (e.g., enterpriser, employee, housewife, and retired/student). It is naturally believed that housewife, student and retired migrants earn less than employees. Therefore, I expect that employed or working migrants (enterpriser, employee) remit higher than unemployed (maybe they work as part time employee) migrants.

### ***The migrants' legal status in the CR***

Fairchild and Simpson (2004), Amuedo-Dorants and Pozo (2006), found that illegal status has positive result on remittances, they explained that undocumented migrants live in more insecure and temporary situation in host country and thus they need to shift their funds to home. Meanwhile, Konica and Filer (2005) found that emigrant Albanians remitted less if they did not have documented status. Therefore, Carling outlined that legal status of migrants doesn't have consistent effects on remittances.

In my opinion, migrants who already have got long term residency, particularly those with Czech permanent residency it may imply that the migrant has a lesser connection with the

home country. The expected signs for estimated effects of these variables are assumed negative. This sign can be reversing (positive) in cases when migrant is an illegal resident or temporary resident due to uncertain position in the host country.

### ***Duration of stay in the CR***

There are certain reasons why remittances decline after emigrants have settled abroad. Carling noted that a one possible reason is financial target level, for instance, if migrants have any repayment (loan, education payment for the children, repayment of expenses related to migration, etc) at the country of origin, they must remit as repayment for these. But, it is clear that, after certain time that repayment target will be achieved. Hence, remittance automatically declines.

Second important reason is the fade of migrants' ties with the community of origin. Empirical studies (Fairchild and Simpson, 2004; Holst and Schrooten, 2006) have shown that the potential remittance recipients are likely to be reduces as time passes. Most common explanation for that is death of migrant's relatives and chain migration. This negative trend when remittances decline by time is known as "the remittance decay hypothesis".

Consequently, I would rather expect negative sign in long term period. Nevertheless, this relationship or remittance behavior is not necessarily linear over time, several studies have showed relationship between time and the value of remittances follows as an inverted U curve (see Jorgan Carling, "The determinants of migrant remittances", 2008). But from my standpoint, remittance sending behavior would flow  $\cap$  curve over time. Reasons are following: Migrant who recently arrived from country of origin cannot possibly remit much as it takes time to find a job and settle down. But once he is able to cover all expenses then he starts sending money. As a result, remittance value would increase gradually over time and then tend to be constant some period of time and after that it should slowly decline or discontinue.

### ***Financial status of migrants***

Monthly income of migrants and the frequency of sending remittances can be considered as an important factor. For example, some migrants send large amounts of money for 1-2 times a year. But the others send smaller amounts of money more frequently incurring more expenses.

Moreover, migrants would naturally demand for an affordable money transferring service. Therefore fee of the remittance service is certainly an important factor affecting the remittance flow.

### ***Other variables***

Besides them, there are 3 more variables included in the regression. These variables could interpret directly or non-directly financial literacy of the migrant.

- Mobile phone availability: If migrant has a mobile phone he/she is more likely (possible) to use those services which are offered via mobile phone.
- Possession of bank account: much like the same described above, meaning he/she is able to use account-to-account services.
- Speed of transaction: Various MTOs offer various services which are differentiated by their service time. The biggest MTO such as WU and MG are able to offer services carried out within few minutes whereas many smaller MTOs service is completed within a working day or numbers of days.

## **4.2 DESCRIPTION OF THE EXPECTED RELATIONSHIPS**

The basic relationship that we want to analyze can be for example in following form (of course it can be also non-linear equation):

$$\log(\text{dependent variable}) = \alpha + \beta_i \times \log X_i + \gamma_j \times Z_j + \varepsilon \quad (1)$$

Where:  $Z_j$  are the dummy variables of the regression model and  $X_i$  are the other non-dummy variables.  $\alpha$  and  $\varepsilon$  interprets the constant and error term of the model. Since the aim is to describe the remitting behavior of migrants, the left hand side is chosen as an average amount of money sent home per one time by a migrant, which I consider as the easiest to capture information based on the data available. The independent variables are for example: the frequency of sending money on a yearly basis, the average amount paid as a cost for using the remittance service, the length of time for transaction to be completed, the gender and the age of

people, type of employment, type of working sector, the length of residency in the CR, monthly income and the legal status of migrants (for further information *see Table 4 in the appendices*). Among these determinations I will attempt to capture the most influential ones that explain the variability in the dependent variable.

As I mentioned above, the money sent by migrant workers is expected to be positively influenced by mainly salary/income of workers, employment status and age of the migrant and negatively by a length of living in CR, the cost of transfer, the length of sending process, frequency of sending. The sign of gender and bank account are rather ambiguous.

### 4.3 ESTIMATION METHOD

According to previous studies [Yoko Niimi (2008), Richard H. Adams (2008) and Aziz Atamanov (2010)], estimating the determinants of remittances requires two econometric issues (*see more in detail*).<sup>36</sup> Firstly, not all migrants send remittances in a given year, which could generate biased estimates during the application of OLS (problem of censored remittances). Secondly, several of independent variables can be endogenous to the regression. Endogeneity problems occur when right hand-side variables (explanatory variables) in the model affect each other or are related to the error terms.

The one possible solution to both problems is use of panel data<sup>37</sup> but in most cases it is not possible due to lack of database. Therefore, several studies suggested other methods and techniques.

There are two main solutions more likely used for the problem of censored remittances. As noted Aziz Atamanov (2010), it is possible to use a two stage Heckman selection procedure, which estimates the decision to remit using a Probit regression (selection equation) and the amount of remittances using correlated OLS. This method allows separating the determinants of the decisions whether and how much to remit. Nonetheless, this method does not work well if errors are not normally distributed, *the sample is small*, the amount of censoring is small, or there

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<sup>36</sup> Aziz Atamanov and Marrit van den Berg, Maastricht University, "Determinants of remittances in Central Asia: evidence based on the household budget survey in the Kyrgyz Republic, 2010"

<sup>37</sup> Panel data which includes repeated observations on the same unit over two or more time periods is a good solution because by taking "first differences" between variables it becomes possible to eliminate many of the biases that arise from endogeneity and omitted variables

is high correlation between explanatory variables in the selection and regression equation.<sup>38</sup> The second method is Tobit regression. This method has been used in various studies in the migrant remittance literature including those by Ahlburg and Brown (1998), Amuedo-Dorantes and Pozo (2006), Liu and Reilly (2004), and Markova and Reilly (2007).<sup>39</sup>

The Tobit model offers a simple way of estimating the determinants of remittances and has following form:

$$R_i^* = \beta' X_i + u_i \quad \text{where: } u_i \sim N(0, \sigma^2); \quad R_i = R_i^* \quad \text{if } R_i^* > 0 \\ R_i = 0 \quad \text{otherwise}$$

$X_i$  is the set of explanatory variable.  $R_i^*$  is latent dependent variable which is observed for values higher than zero, and  $R_i$  is actual value of remittances. The model is solved using maximum likelihood estimation techniques. Because there is no reason to assume that the determinants of the probability and the size of remittances are different and because of the difficulty to find instruments for the decision to remit<sup>40</sup> therefore, Tobit regression is used in this paper.

In general, the second econometrical problem can be solved by using several econometrical methods for instance: instrumental variables, two stage least squares and, control estimator. But in the literature of remittances, “instrumental variables” method employed more often including Yoko Niimi (2008), Richard H. Adams (2008), and Aziz Atamanov (2010).

In our case endogeneity problems didn’t take place in the regression model (*see collinearity matrix in the appendices section*) as a result it is unnecessary to use this method.

#### 4.4 EMPIRICAL RESULTS

For the sake of appropriate interpretations and significance of the model, I did following changes to the data structure:

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<sup>38</sup> Source: Aziz Atamanov and Marrit van den Berg, Maastricht University, “Determinants of remittances in Central Asia: evidence based on the household budget survey in the Kyrgyz Republic, 2010”, pg 13.

<sup>39</sup> Source: Yoko Niimi, Thai Hung Pham, and Barry Reilly, The WB working paper, “Determinants of Remittances: Recent Evidence Using Data on International Migrants in Vietnam”, 2008.

<sup>40</sup> See more detail: Aziz Atamanov and Marrit van den Berg, Maastricht University, “Determinants of remittances in Central Asia: evidence based on the household budget survey in the Kyrgyz Republic, 2010”, pg 14.

- The variable “mobile phone” was excluded from our regression. All migrants who were interviewed in our survey, answered “yes” to the question if they had/used mobile phone in both countries.

- Some of the variables combined into one group. For instance, instead of variable “Type of Employment” we use “Employment Status”. To do it, “Enterpriser” and “Employee” are combined in a new variable “Employed” and other three variables, i.e., “Student”, “Housewife” and “Unemployed” are consolidated into “Unemployed” category.

- The dummy variable “working sector” is defined by two categories instead of previous 9 categories: A migrant works in an industrial sector or other sectors.

Moreover, I reformulate the following new variables from the previous data which are more appropriate to our regression. These are: “Total remittance”, “Total cost”, and “Total income”.

Instead of “Remit amount” I used “Total remittance” which is equal to “Frequency” times “Remit amount”; in place of “Cost amount”, “Total cost” is used and is equal to “Frequency” times “Cost amount”; and “Income” is replaced by “Total income” which is equal to 12 times “Income” (*see Table 4 and Table 5 in the appendices*). This helps to aggregate data on a yearly basis.

In this part two estimation methods Tobit and OLS are used in our regression. The dependent variables are the total remittances sent by migrant workers during a year. Table 2 contains results from both empirical models. Various tests are also attached in the appendices section.

**Table 2:** The results of the models, source: calculation based on the 2009 Czech National Survey data

<b>Variables</b>	<b>Tobit</b>		<b>OLS</b>	
<b>Log(length of stay)</b>	<b>-110,509</b> (243,003)		<b>-110,509</b> (218,264)	
<b>Total Income</b>	<b>0,00648501</b> (0,0858503)		<b>0,00648501</b> (0,0303505)	
<b>Log(Total Cost Amount)</b>	<b>1866,50</b> (124,485)	***	<b>1866,50</b> (219,226)	***
<b>Log(Age)</b>	<b>752,706</b> (690,172)		<b>752,706</b> (607,776)	
<b>Minutes (Dummy)</b>	<b>-994,666</b> (290,821)	***	<b>-994,666</b> (367,737)	***
<b>Hours (Dummy)</b>	<b>351,548</b> (439,515)		<b>351,548</b> (383,892)	

<b>Female (Dummy)</b>	<b>458,722</b> (268,509)	*	<b>458,722</b> (257,731)	*
<b>Bank Account (Dummy)</b>	<b>-687,848</b> (337,620)	**	<b>-687,848</b> (382,416)	*
<b>Employed (Dummy)</b>	<b>853,527</b> (1426,78)		<b>853,527</b> (345,708)	**
<b>Industry Sector (Dummy)</b>	<b>-218,390</b> (414,375)		<b>-218,390</b> (433,621)	
<b>Temporary Resident (Dummy)</b>	<b>-665,373</b> (693,325)		<b>-665,373</b> (535,400)	
<b>Illegal Resident (Dummy)</b>	<b>-756,920</b> (1268,27)		<b>-756,920</b> (542,697)	
<b>Constant</b>	<b>-8235,45</b> (3060,43)	***	<b>-8235,45</b> (2544,75)	***
<b>Sigma</b>			<b>1122,88</b>	
<b>R<sup>2</sup></b>				<b>0,691333</b>

Notes: 1. \*\*\*, \*\*, and \* denote statistical significance at the 0.01, 0.05 and 0.1 levels respectively.

2. Detailed results with first stage regressions are attached in electronic form of the thesis.

There are total of 5 significant variables without considering constant variable in the OLS estimation model. The value of R squared is 0, 69 which is adequate for accepting this regression model. In other words, approximately 69 % of the variation in the response variable can be explained by explanatory variables. In contrast, there are 4 significant variables in the Tobit estimation model and sigma coefficient in this model is about 1123.

In general, we can say that the most of the selected explanatory variables do not appear to affect remittance behavior except the variables “Total cost”, “Minutes”, “Female”, and “Bank account” in the Tobit model and the significance of their coefficients suggest these are important variables in the model at the 0.1, 0.05, 0.01 level of significance.

In most cases, proportional relationships between variables are the very sort of systematic relationships that epitomize “collinearity”<sup>41</sup> which can influence significance of the explanatory variables. Therefore, collinearity test is used in our regression model and it says no collinearity problems occurred in both OLS and Tobit model (*tests are attached in the appendices section*).

The result of these models confirm (not considering significance of coefficients) our previous hypothesis that the money sent by migrant workers is positively influenced by age of the

<sup>41</sup> Source: Carter, R., William, E., Guay, C. (2008): Principles of ECONOMETRICS; John Wiley & Sons, Inc. USA. Pg 153-157;

migrants, employment status (employed) while it is negatively influenced by migrants' length of stay and type of working sector, i.e., industry sector in our case.

#### **4.5 INTERPRETATION OF THE ESTIMATES**

The regression model shows the migrants' remitting behavior by means of various determinant variables i.e. "total income", "total cost", "length of stay", "age of migrants" and a range of dummy variables.

In general, I found no significance effect for the several of explanatory variables i.e. length of stay, total income, age of the migrant, employment and legal status of the migrant. In contrast, total cost of the transfer service has a well defined positive effect on remittances. Our estimation shows that a percentage increase of total cost of the transfer service leads approximately to an 1866 unit USD positive change in total remitting value. In other words, if total cost of the remittances service increases by 1 percentage the total remittances value also increase by USD1866 whereas common sense suggests that increasing the cost of service decreases an amount of remittance flow. But this could have a different interpretation in this model because the service fee is designated in brackets: For example when I send \$100, I pay \$20 for it. But if I send \$200, I only pay \$30 for the service. Of course \$30 is higher than \$20, but its percentage of increase is not higher. An amount of remittance determines its service costs, the higher the remittance sent, the higher the cost. Maybe data structure keeps this relationship and our regression proves it.

The gender of the migrant is estimated to have significant effect on remittances. Compared to those male migrants, females send larger remittances: A female migrant sends about \$ 459 greater than a male migrant during one year. In my point of view, the result of this estimation is very close to reality. The evidence shows that Mongolian women are more likely to have higher education than men. For example, about 70 percent of all students at universities in Mongolia are estimated to be female students. Moreover naturally women are better at mastering foreign languages than men. Therefore, female migrants more quickly adapt a given country's condition and usually take care of the issues like remittances sending, office meetings, and visiting the hospital where certain level of language knowledge is required. Nonetheless, this evidence is considered to be reverse in many other cases. In our case female sending more money can be the result of selection of a dependent variable i.e. total value of remittances as more than

half of interviewees were female (66 interviews were females out of 110) even the largest value of female migrants was smaller than that of male migrants: The maximum value of total remittance of male was \$ 10,000 and female was \$ 8400 in one year. Thus, greater number of female workers may influence estimates of model and appear to send larger remittances.

Having a bank account in the CR negatively impacts the value of total remittances. Migrants with a bank account remit \$ 688 less than those without bank accounts. We could interpret it as a reflection of the fact that the migrants with bank accounts are more settled in the Czech Republic. As I mentioned previously, problems related to a language barrier and required documents (legality) are the most common problems in the community of Mongolian migrants especially for those migrants who live illegally or those with short term permits (meaning living not longer in the host country). Having a bank account implies that the migrant has a certain level of language knowledge and required documents. Indeed this is possible for migrants with long term residency who usually live with their families in host country and have a less connection with the country of origin. As a consequence, migrants with bank accounts may remit less than migrants who have no bank accounts.

Finally, the variable “Minutes” has negative effect on total remittance value. Compared to the independent variable “Days”, variable “Minutes” has 995 less unit effect on the remittances. The variable “Minutes” represent here MTSs which are able to deliver money within few minutes meanwhile variables “Days” and “Hours” refer to those transaction services which are completed within days and hours. It suggests that migrants prefer transfer services proceeded within couple of days than services which take several minutes and it reflects the characters of services themselves. Services provided by for example WU and MG are usually considered as the fastest remittance services and accordingly their service costs are tend to be higher than the other remittance services. In contrast, services with longer proceedings usually charge smaller fee than those quick transfer services. It is clear that migrants usually prefer cheaper services if not urgent. Therefore, migrants use “Days” services rather than “Minutes” services.

## 5. CONCLUSIONS AND IMPLICATIONS OF THE ANALYSES

### 5.1 CONCLUSIONS

Before I conclude the thesis, I want to mention again this thesis is only case study and all the analyses and conclusions stated in this paper are based on the data collected among Mongolian migrants. Therefore, the outcome of the thesis couldn't interpret whole market condition or the entire migrants' remitting behavior and their problems facing in the process of remitting.

In general, this bachelor thesis has empirically examined the conditions of the market for remittances in the CR and key determinants of migrant remittances at the individual level using recently conducted survey on market for remittances in the CR among Mongolian migrant community. Furthermore the thesis tried to find out the main factors that create inefficiencies in CR remittance market and also attempted to determine characteristics and functioning of Czech-Mongol remittance corridor, specification of Mongolian migrants' remitting behavior and their actions on the related market.

The empirical analyses yielded a number of key findings and suggest below steps as implication of the work.

First, the study found that the Czech remittance market is relatively transparent in standpoint of possibility to know transfer speed and total price of the services. Migrants are able to know the transaction speed and total price of the services in most cases. This can be related to the type of remittance service itself. Because Mongolian migrants are more likely to use franchised and negotiated types of remittance services which are considered transparent services among others.

It is found that approximately 63 percent of all transactions were completed in several days (usually 2-3 days) and other 36 percent completed in couple of hours or minutes. But, the transaction delay problem occurs frequently, precisely every sixth transaction has been delayed. Mongolian migrants usually convert their money into the currency being sent at a reasonable rate elsewhere rather than at the MTS rates. This reduces their exchange loss to the certain level at which no outsized loss happens.

Consumer protection issues are still very sensitive problems in the CR. Due to language barrier and less financial knowledge, many migrants cannot practice their rights. For example poorly educated migrant speaking only his own language has limited possibility of comprehensive usage of remittance services and needs a second person in order to have an access to the services. As a result, they tackle with many problems related to remitting fund such as loss of money, additional charge, and incorrect amounts received etc.

Therefore financial literacy training programs and language courses may have positive impact on being protected and overall transparency of the market condition.

The payment system infrastructure is well developed and access points are broadly reachable in everywhere in the CR. In contrary to the CR, Mongolian payment system infrastructure is relatively poor developed, and remittance collecting points usually locate in urban areas. Nonetheless, there is sufficient infrastructure established by market main player commercial banks. Particularly, the base of internet banking and mobile banking services is already established and it is ready to be used for remittance transfer services.

The Czech remittance market is considered to be relatively less competitive and relies mostly on MTOs. The most preferred MTOs among Mongolian migrants is the Chequepoint who considered closer RSP to Mongolian migrants thanks to their active marketing policy. The market participants such as commercial banks, credit unions and post offices are much less popular. Informal ways of sending money are quite trendy among Mongolian community. The method “relatives and friends” which is considered as an unofficial way of sending money possesses a bigger share in the actively used methods of the remittance sending. Maybe this high trend of informal ways of sending money in the market influences less attractive for the banks and post offices.

The empirical estimation model confirms that Mongolian migrants are more likely to use slow speed services with cheapest prices. In other words, migrants prefer cheaper price to quick transaction service. Also Mongolian female migrants tend to send greater value of remittances than male ones.

## **5.2 IMPLICATIONS**

The implication of my paper is inclined by following suggestions related to Mongolian migrants who wish to decrease the cost of remitting; both countries’ RSPs who try to increase their service

availability among migrants and authorities of the CR who want to establish efficient market structure.

➤ Mongolian migrants

In general, a peculiarity of Mongolian is the small number of inhabitants with unique spoken language. Thus, for the regular Mongolian migrants, it is difficult to join other social communities due to language barrier in any foreign country. Therefore, it is practical to offer them services which are provided in their native language. On the other hand, Mongolian migrants should explore themselves the services which are already available in Mongolian language. For example following services are provided by Mongolian banks.

***“GOLOMT” online banking:***

Golomt bank offers online banking services which enable to open and manage account by online for Mongolian migrants who are living abroad and wish to save money at Golomt bank. Feature of this service is that a migrant can open a saving account without any fee by online even though migrant is not possible to visit the bank personally. Moreover, it is also possible to deposit funds to account by using internet services such as PayPal.

***“KHAN” quick pay service:***

Mongolian “KHAN” bank is launched the WU’s QUICK PAY service which enables customers to make direct payment for their mortgage, leasing and other various loans payments quickly and easily with the lowest fee for example: 15\$ for transaction between 1\$ -3000\$, 25\$ for range of 3000\$-5000\$. This service is currently available for the migrants in US and German. Furthermore, bank has planning to make this service available in other countries very soon.

➤ RSPs

Any RSP who want to attract migrants to increase their share of business especially among Mongolian migrants could take into account the following points:

***Better prefer cheaper price to quick speed:***

As an implication of empirical estimation, I would suggest for the RSPs who want to attract Mongolian migrants that it is better to find cheapest remittance corridor (no matter it is slow) than expensive and quick remittance corridors.

***Multi-language order card for sending money and basic introductions to the remittance services in native language:***

RSPs would provide information to the migrants about their services in their own language at least within largest migrant groups. Multi-language brochures would help migrants to understand basics of transactions.

***Best service management, Chequepoint cases:***

As I already mentioned, RSP Chequepoint has interesting management among Mongolian migrant community. They usually hire translators of Mongolian-Czech language who gained respects and is notable among migrants as an agent of the company. Thanks to these translators, RSP Chequepoint was well established their positions among Mongolian migrants. As a result, other RSPs can use this successful management among certain specific ethnic groups.

***Cooperation between NBFIs and RSPs:***

Migrants care not only about transfer services which are easily accessible or cheapest, but also care about the safety of their remittance until they back home. During the survey, it was discovered that besides the money sent as a support for their family, many migrants remit money as financial basis of their return. Many migrants are not satisfied with safety and wholeness of remittances since they send it to someone near or relatives. As a result, they demand for remittance services with direct deposit options in banks or financial institutions in the country of origin. Therefore, I would suggest RSPs to include direct deposit options in their service menu by cooperating with banks or NBFIs of Mongolia.

***“GOLOMT” bank’s branch in Korea Republic:***

One of the biggest Mongolian banks “Golomt” came up with an interesting solution to money transfer issues. It cooperates with Korean Shinhan bank’s branch in Ansan-si city, “Kyonggi” province of the Korea Republic where immigration rate of Mongolian community is the highest. The branch employs a clerk speaking both Mongolian and Korean who then bridges the bank with migrant offering wide range of financial services including money transfer, direct money

deposit and loan services etc. Perhaps, this example could be one possible solution in the case of Mongolian migrants in CR.

***Mobile and internet banking possibilities:***

As I mentioned earlier, Mongolian financial system infrastructure is potentially developed for the mobile and internet banking services as the geographic and low population density do not favor the physical access point based services. Moreover mobile phone usage rate is quite high about 87.5 percent (2,362,000 people in year 2010)<sup>42</sup> of all population in Mongolia. Therefore, it might be essential for future business development if RSPs establish remittance service infrastructure which is based on mobile phone and internet networking.

- Authorities of the CR

***Financial literacy training course for the migrants:***

Most migrants don't have basic financial knowledge. Their remittance service choices are made based on other migrants' opinion or based on their previous knowledge. Therefore, I would recommend performing financial literacy training courses in their languages with assistance of employees in embassies and translators of social-communities. It would help migrants to make right choices and benefit the interest of the CR for implementation of the plan for enhancing market transparency and efficiency.

***Enhancing the cooperation between state institutions and non-government organizations (NGO):***

We knew from the literature review section that collecting remittances data and quality of the survey is one of the problematical issues faced to policymakers and researchers. As an interviewer I would like to mention here that more practical and realistic research workers among other research papers are more likely published by NGO for migrant related issues. Good example is research investigation of Blanka Tollarová & Tereza Rejšková (Multicultural Center Prague) "Sending Remittances from the CR to the Country of Origin" Report from a research investigation, (2009). From my point of view, employees of these NGOs are well trained for communicating with foreign citizens and more close to communities of the migrants and their life

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<sup>42</sup> Source: <http://www.bharatbook.com/detail.asp?id=109423&rt=Mongolia-Telecoms-Mobile-Internet.html>, 14.04.2011

thus allows qualified survey imputes for their research works. Therefore, researchers and authorities better get help from the NGO for the data collecting and survey related issues.

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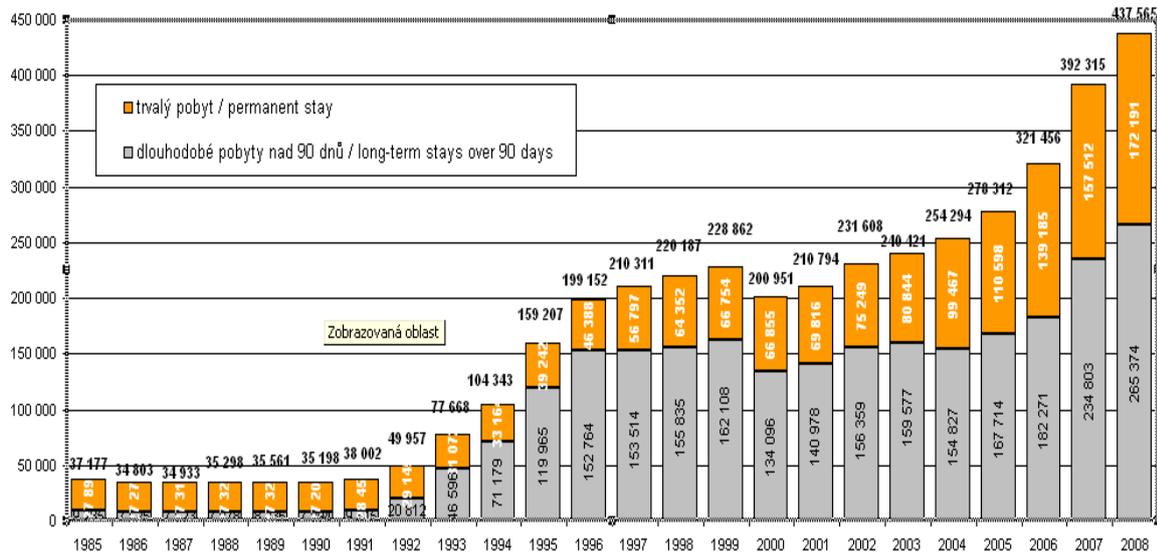
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# APPENDECIS



Graph 4: The number of foreigners in the CR; 1985-2008 (31.12), Source: Czech Statistical Office; available at: <http://www.czso.cz/csu/cizinci.nsf/tab/B900334F9B>

Table 3: The brief summaries of the presentations about remittance related issues presented in the CR

Author	Title	Description
<b>Guillaume CRUSE</b> (Executive Director's Advisor on migrations)	"Remittance flows and development impact approach", (2009) AFD	Basic introduction to remittances, regulation of remittances and remittances impact on development. Introduction to the British "send money" project.
<b>Ghenadie CRETU</b> (International Organization for	"Republic of Moldova - country experience", (2009)	Moldovan migration and remittance flows to the Moldova. Survey on remittances by IOM: remittance transfer channels, use and poverty impact of remittances. Policy recommendation by IOM to Moldova: 1. Create a sound policy

<p><b>Migration, Mission to Moldova)</b></p>		<p>environment,</p> <ol style="list-style-type: none"> <li>1. Reduce transaction costs,</li> <li>2. Encourage productive use,</li> <li>3. Improve data collection on remittances</li> </ol>
<p><b>Carlo CORAZZA (Remittances Specialist Payment Systems Development Group The WB)</b></p>	<p>“Enhancing the Efficiency of the Remittance Market in the CR: an overview of the international situation and future programs in the country”, (2010)</p>	<p>Introduction to General Principles for International Remittances Services, Implementation of the GPs, Implementing the GPs for the CR. Possible future actions suggested by WB payment group:</p> <ol style="list-style-type: none"> <li>1. Creation of national remittances prices databases</li> <li>2. financial literacy programs for the migrants</li> <li>3. Creation and promotion of a National Code of Conduct for RSPs</li> </ol>
<p><b>Brij JOSHI (Head Global Remittances and Mobile Payments EMEA, Citi Bank)</b></p>	<p>“Citi QuikRemit”, (2010)</p>	<p>Introduction to opportunity for Global Remittances, growing trend of encouraging banks to become formal remittance market, introduction to “Citi QuickRemit” remittance model. Basically these are three types of remittance model: Web-based, In-branch, and File based remittance model. First and second models are designed for clients who have banking license and third model is for other clients, here banking license does not</p>

		necessary.
<b>Denisa Jindřichová (Czech National Bank (CNB), Payment Systems Policy and Development Division)</b>	“Payment system’s legislation and its impact on Czech industry“, (2010)	Introduction to transposition of Payment System Directive (MF and CNB) in the CR, PSD aims (to create harmonized legal framework for payments, to have common rules for all types of payments, to increase provider responsibility, to create competition for credit institutions, to increase credit institution innovation), and Czech Payment System Act (transposition of three European directives → new legal forum of PS )
<b>Petr Sedláček (CNB)</b>	“Remittances in the CR and their determinants“, (2010)	Introduction to important source of remittances, fact and trends, some possible determinants of remittances (GDP, unemployment rate, demographic variables i.e., sex, duration of stay)
<b>Blanka Tollarová &amp; Tereza Rejšková (Multicultural Center Prague)</b>	“Sending Remittances from the CR to the Country of Origin” Report from a research investigation, (2009)	Determining a remittances and remittance sending process, formal and informal ways of sending money to home, survey on remittance use in the country of origin, Migrants’ awareness of remittance sending option (migrants share information about potential or established means of sending remittances by word of mouth), the role of NGOs and their services to the right remittance service options.

**Table 4:** Descriptions of the expected determinant variables

Variables	Description	Sample Mean
REMIT AMOUNT	<b>Dependent variable, On average, how much money they send each time</b>	343,86
FREQUENCY	the frequency, how often they send money during a year	6,736
COST AMOUNT	on average, the MTS fee	15,521
TIME:	time taken to complete a transaction	
MINUTES	Dummy variable for recipients receive funds in minutes	0,256
HOURS	Dummy variable for recipients receive funds in couple of hours	0,110
DAYS	Dummy variable for recipients receive funds within few days	
BANK ACCOUNT	Dummy variable for having a bank account either in home or host countries	0,781
MOBILE PHONE	Dummy variable for having a mobile phone in host country (CR)	1
FEMALE	Dummy variable for being female	0,6
AGE	senders' age expressed in years	32,527
TYPE OF EMPLOYMENT:	enterpriser, employee, housewife, student, or unemployed	
ENTERPRISER	Dummy variable for being an enterpriser	0,027
EMPLOYEE	Dummy variable for being an employee	
HOUSEWIFE	Dummy variable for being housewife	0,018
STUDENT/RETIRED	Dummy variable for being student/retired	0,018
UNEMPLOYED	Dummy variable for being an unemployed	0,018
WORK SECTOR:	Agriculture, Manufacturing, Construction, retail trade, and so on...	
AGRICULTURE/FORESTY	Dummy variable for working in these sectors	0,009

<b>MANUFACTURING AND OTHER INDUSTRIES</b>	Dummy variable for working in these sectors	
<b>CONSTRUCTION</b>	Dummy variable for working in these sectors	0,018
<b>WHOLE/RETAIL SALE</b>	Dummy variable for working in these sectors	0,045
<b>TRANSPORTATION AND STORAGE</b>	Dummy variable for working in these sectors	0,063
<b>ACCOMMODATION/FOOD SERVICE ACTIVITIES</b>	Dummy variable for working in these sectors	0,081
<b>INFORMATION AND COMMUNICATION</b>	Dummy variable for working in these sectors	0,018
<b>PROFESSIONAL, SCIENTIFIC AND TECHNICAL</b>	Dummy variable for working in these sectors	0,009
<b>LENGTH OF STAY</b>	the length of staying in CR	2,927
<b>MONTHLY INCOME</b>	salary in CR per month	628,344
<b>LEGAL STATUS:</b>	citizen, legal resident, temporary resident, refugee, illegal resident (dummy variable)	
<b>CITIZEN</b>	living in the CR as resident	0
<b>LEGAL RESIDENT</b>	living in the CR as legal resident (more than 12 months)	
<b>TEMPORARY RESIDENT</b>	living in the CR as temporary resident (more than 12 months)	0,1
<b>REFUGEE</b>	living in the CR as refugee	0
<b>ILLEGAL RESIDENT</b>	living in the CR as illegal	0,036

**Table 5: Descriptions of the independent variables**

Variables	Description	Sample Mean
<b>TOTAL REMIT AMOUNT</b>	<b>Dependent variable, On average, how much money they send in a year</b>	2363,3
<b>TOTAL COST AMOUNT</b>	on average, how much they pay for remittance services as fee of the transfer in a year	106,75

TIME:	Dummy variable for time taken to complete a transaction	
MINUTES	recipients receive funds in minutes	0,256
HOURS	recipients receive funds in couple of hours	0,110
DAYS	<i>dummy (base)</i> recipients receive funds within few days	
BANK ACCOUNT	Dummy variable for having a bank account either in home or host countries	0,781
FEMALE	Dummy variable for being female	0,6
AGE	senders' age expressed in years	32,527
EMPLOYED:	Dummy variable, migrant is employed if enterpriser or employee, otherwise migrants is unemployed	0,94545
INDUSTRY SECTOR:	Dummy variable, If migrant works in industry sector, the sign will be 1 otherwise it is 0	0,75455
LENGTH OF STAY	the length of staying in CR	2,927
TOTAL INCOME	Approximation of their income per year in CR, monthly income*12.	7540,1
LEGAL STATUS:	legal resident, temporary resident or illegal resident (dummy variable)	
LEGAL RESIDENT	<i>Dummy (base,)</i> living in the CR as legal resident (more than 12 months)	
TEMPORARY RESIDENT	living in the CR as temporary resident (more than 12 months)	0,1
ILLEGAL RESIDENT	living in the CR as illegal	0,036

Table 6: Questionnaire for the Czech National Survey on the Market for Remittances, Source: Marco Nicoli and Carlo Corazza, *The Market for Remittance Services in the CR*, Pg 28, ISBN 978-0-8213-8585-2

Survey on Remittances Market in Czech Republic

Good morning/afternoon. We are conducting a survey on remittances in order to find solutions for migrants in the Czech Republic and we are interested in your opinion. The survey is completely anonymous and will only take 15 minutes of your time.

Questionnaire number	
Interviewer	
Location	
Date	

**A) To begin, do you send remittances? (MARK ONLY ONE)**

YES	1
NO (DISCONTINUE SURVEY)	0

**1) What country are you from? (MARK ONLY ONE)**

Ukraine	1
Vietnam	2
Slovak Republic	3
Russia	4
China	5
Moldova	6
Mongolia	7
Poland	8
Other (DISCONTINUE SURVEY)	0

**A. REMITTANCES**

**2) To what city do you send money usually? (ENTER ONLY ONE)**

Does not know / No response	99
-----------------------------	----

**3) On average, how much money do you send each time? (ENTER ONLY ONE)**

a. AMOUNT \_\_\_\_\_ b. CURRENCY (CZK, USD, EUR, ETC.) \_\_\_\_\_

Does not know / No response	99
-----------------------------	----

**4) How frequently do you send money during a year?**

\_\_\_\_\_ TIMES

Does not know / No response	99
-----------------------------	----

**5) How much do you pay on average to send the money?**

a. AMOUNT \_\_\_\_\_ b. CURRENCY (USE SAME AS IN Q3)

Does not know / No response	99
-----------------------------	----

**6) Do you specify the transfer to be paid in Euros, Dollars or in your country's currency? (MARK ONLY ONE)**

Euro	1
Dollar	2
Home country currency	3
Does not know / No response	99

If response is same currency as in Q3, skip to Q7; if different, skip to Q6.1

Survey on Remittances Market in Czech Republic

**6.1) Do you know whether an exchange rate is applied to the transaction? (MARK ONLY ONE)**

YES	1
NO	0
Does not know / No response	99

**6.2) How does the remittance company make you aware of the exchange rate? (MARK ONLY ONE)**

I am not made aware, I don't have a way of knowing until after the transaction is made	1
I am not made aware, I have to ask at the transfer location	2
I am told when am making the transaction	3
I am told when I call over the phone prior to going to the location	4
There are posted signs at the location showing the exchange rate of the day	5
Other (i. please specify: _____ )	6
Does not know / No response	99

**6.3) How do you confirm that the reported exchange rate is the same as at the time of cash withdrawal? (MARK ONLY ONE)**

I do not confirm the exchange rate, I trust it is right	1
I give the exchange rate information to my relative and he/she confirms it to me	2
My relative asks me about the exchange rate and I confirm whether that was the amount paid	3
Other (i. please specify: _____ )	4
Does not know / No response	99

**7) The written information about the details of the transfer, is given to you (MARK ONLY ONE)**

Before the transaction is completed	1
After the transaction is completed	2
Before and after the transaction is completed	3
I do not receive written information about the details of the transaction	4
Does not know / No response	99

**8) Which is your preferred method of sending money home? (MARK ALL THAT APPLY)**

a. Bank/Credit Union	1
b. Money Transfer Operator (Western Union, Exchange Bureaus, etc.)	1
c. Post Office with Western Union	1
d. Post Office with Other	1
e. Regular mail	1
f. Friends/Relatives traveling	1
g. Courier	1
h. ATM	1
i. Debit/Credit Cards	1
j. Mobile Phone	1
k. Other (i. like a super market, please specify: _____ )	1
Does not know / No response	99

**9) What is the name of your preferred remittance company (not method)? (ENTER ONLY ONE)**

Does not know / No response	99
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Survey on Remittances Market in Czech Republic

**10) Why do you send money with these methods? (MARK ALL THAT APPLY)**

a.	It is inexpensive compared to other companies and methods	1
b.	It is fast	1
c.	It is easy to use/comprehensible	1
d.	It is safe	1
e.	It is close to where I live	1
f.	It is conveniently located for the people I send the money to	1
g.	I have no official ID/Passport	1
h.	Other (i. please specify: _____ )	1
	Does not know / No response	99

**11) What source most informs your decision to choose a remittance company? (MARK ALL THAT APPLY)**

a.	Recommendation from other immigrants or friends	1
b.	Word of mouth	1
c.	Advertisement in the streets	1
d.	Advertisement in the newspaper	1
e.	Advertisement on the TV/Radio	1
f.	Advertisement on a leaflet in my native language	1
g.	The embassy/consulate gave me the information	1
h.	Internet	1
i.	My family at home gave me the information	1
j.	During a meeting of the migrant association I am a member of	1
k.	During the mass/in the church	1
l.	Other (i. please specify: _____ )	1
	Does not know / No response	99

**12) How long are you told at your most used remittance company that it takes for the transfer to be ready for withdrawal? (MARK ONLY ONE)**

Minutes	1
A couple of hours or first thing next morning	2
One day	3
I am not told how long, is uncertain	4
Other (i. please specify: _____ )	5
Does not know / No response	99

**13) How do the receivers usually collect the money? (MARK ALL THAT APPLY)**

a.	They withdraw the money at a specific bank/Money Transfer Operator	1
b.	They go to any branch of a bank/Money Transfer Operator	1
c.	They receive it in their bank account	1
d.	They withdraw the money at an ATM	1
e.	It is delivered to their home	1
f.	They go to the Post Office	1
g.	They receive it in their mobile phone account	1
h.	Other (i. please specify: _____ )	1
	Does not know / No response	99

**14) When the receivers collect the money... (MARK ONLY ONE)**

Their only choice is to receive in local currency	1
They have a choice to receive in local currency or foreign currency (CZK, USD, EUR, etc)	2
Does not know / No response	99

**15) Have you ever had problems in the past when you have sent the money? (MARK ALL THAT APPLY)**

a. The money was not received and I lost everything	1
b. The sum received was not correct	1
c. The money arrived with many days of delay	1
d. The receiver had to pay a fee to withdraw the money	1
e. Other (i. please specify: _____ )	1
f. I never had any problem	1
Does not know / No response	99

If marked yes for Q15f or marked Does not know / No response, skip to Q17. Otherwise, ask Q16.

**16) In case of any problem during the sending of your money, which of the following authorities/persons have you contacted/would you contact to request help? (MARK ALL THAT APPLY)**

a. The police	1
b. The general prosecutor	1
c. The Financial Arbiter	1
d. The embassy/consulate	1
e. The management of the agency you send money to	1
f. The manager of the Money Transfer Operator	1
g. The director of the Bank/Post Office	1
h. Friends	1
i. None of above	1
j. Other (i. please specify: _____ )	1
Does not know / No response	99

**17) Would you like to use a more efficient way to send your remittance? (MARK ONLY ONE)**

Remittance card	1
Direct deposit on a bank account	2
Internet	3
Mobile phone based transfers	4
Other (i. please specify: _____ )	5
I won't change	0
Does not know / No response	99

**B. FINANCIAL SERVICES**

**18) Do you have a bank account? (MARK ONLY ONE)**

Checking account		1
Savings account		2
Both		3
Neither		0
Does not know / No response		99

**19) Do you have a mobile phone? (MARK ONLY ONE)**

Yes		1
No		0
Does not know / No response		99

**→→→CONTINUE ON NEXT PAGE →→→**

### C. DEMOGRAPHICS

20) What is your sex? *(DO NOT ACTUALLY ASK! MARK ONLY ONE)*

Male	1	Female	0
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21) How old are you?

_____ YEARS	Does not know / No response	99
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22) For how long have you been living in the Czech Republic?

_____ YEARS	Does not know / No response	99
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23) What type of work do you currently do in the Czech Republic? *(MARK ONLY ONE)*

Enterpriser	100
Employee	101
Housewife	102
Student / Retired	103
Unemployed	104
Other (i. please specify: _____ )	105
Does not know / No response	999

24) In which sector? *(MARK ONLY ONE)*

Agriculture, forestry and fishing	200
Manufacturing and other industry	201
Construction	202
Wholesale and retail trade	203
Transportation and storage	204
Accommodation and food service activities	205
Information and communications	206
Financial and insurance	207
Real estate activities	208
Professional, scientific and technical	209
Administrative and support services	210
Public administration	211
Education	212
Human health and social work activities	213
Arts entertainment and recreation	214
Other (i. please specify: _____ )	215
Does not know / No response	999

25) More or less, how much is your salary here in the Czech Republic per month?

\_\_\_\_\_ CZK

Does not know / No response	99
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26) What is your legal status in the Czech Republic? *(MARK ONLY ONE)*

Citizen	1
Legal Resident (living in the Czech Republic for more than 12 months)	2
Temporary Resident (living in the Czech Republic for less than 12 months)	3
Refugee	4
Illegal resident	5
Does not know / No response	99

**Table 7: Tobit estimation model, using Gretl program**

Convergence achieved after 77 iterations

Model 40: Tobit estimates using 104 observations from 1-110  
 Missing or incomplete observations dropped: 6  
 Dependent variable: TotalRemittanc

VARIABLE	COEFFICIENT	STDERROR	T STAT	P-VALUE
const	-8235,45	3060,43	-2,691	0,00712 ***
D_Minutes	-994,666	290,821	-3,420	0,00063 ***
D_Hours	351,548	439,515	0,800	0,42380
D_BankAcct	-687,848	337,620	-2,037	0,04162 **
D_Gender	458,722	268,509	1,708	0,08756 *
D_TemporaryResi	-665,373	693,325	-0,960	0,33721
D_Dillegal	-756,920	1268,27	-0,597	0,55063
D_Employed	853,527	1426,78	0,598	0,54969
D_IndustrySecto	-218,390	414,375	-0,527	0,59817
l_Age	752,706	690,172	1,091	0,27545
l_TotalCost	1866,50	124,485	14,994	<0,00001 ***
l_LengthofSta	-110,509	243,003	-0,455	0,64928
TotalIncome	0,00648501	0,0858503	0,076	0,93979

Mean of dependent variable = 2435,41  
 Standard deviation of dep. var. = 2030,89  
 Censored observations: 0 (0,0%)  
 sigma = 1122,88  
 Log-likelihood = -878,029  
 Akaike information criterion (AIC) = 1784,06  
 Schwarz Bayesian criterion (BIC) = 1821,08  
 Hannan-Quinn criterion (HQC) = 1799,06

**Table 8: OLS estimation model, using Gretl program**

Model 54: OLS estimates using 104 observations from 1-110  
 Missing or incomplete observations dropped: 6  
 Dependent variable: TotalRemittanc  
 Heteroskedasticity-robust standard errors, variant HCl

VARIABLE	COEFFICIENT	STDERROR	T STAT	P-VALUE
const	-8235,45	2544,75	-3,236	0,00169 ***
D_Minutes	-994,666	367,737	-2,705	0,00816 ***
D_Hours	351,548	383,892	0,916	0,36222
D_BankAcct	-687,848	382,416	-1,799	0,07538 *
D_Gender	458,722	257,731	1,780	0,07844 *
D_TemporaryResi	-665,373	535,400	-1,243	0,21715
D_Dillegal	-756,920	542,697	-1,395	0,16649
D_Employed	853,527	345,708	2,469	0,01542 **
D_IndustrySecto	-218,390	433,621	-0,504	0,61573
l_Age	752,706	607,766	1,238	0,21872
l_TotalCost	1866,50	219,226	8,514	<0,00001 ***
l_LengthofSta	-110,509	218,264	-0,506	0,61386
TotalIncome	0,00648501	0,0303505	0,214	0,83128

Mean of dependent variable = 2435,41  
 Standard deviation of dep. var. = 2030,89  
 Sum of squared residuals = 1,31129e+008  
 Standard error of residuals = 1200,41  
 Unadjusted R-squared = 0,691333  
 Adjusted R-squared = 0,65063  
 F-statistic (12, 91) = 11,243 (p-value < 0,00001)  
 Log-likelihood = -878,029  
 Akaike information criterion (AIC) = 1782,06

Table 9: Collinearity test for independent variables

Variance Inflation Factors

Minimum possible value = 1.0  
 Values > 10.0 may indicate a collinearity problem

8)	D_Minutes	1,185
9)	D_Hours	1,110
10)	D_BankAcct	1,126
11)	D_Gender	1,089
19)	D_TemporaryResi	1,800
20)	D_Dillegal	1,373
14)	D_Employed	1,041
15)	D_IndustrySecto	1,997
22)	l_TotalCost	1,232
27)	l_Age	1,112
28)	l_LengthofSta	1,174
3)	TotalIncome	1,178

$VIF(j) = 1 / (1 - R(j)^2)$ , where  $R(j)$  is the multiple correlation coefficient between variable  $j$  and the other independent variables

Table 10: Correlation Coefficients Matrix, endogeneity problem wasn't occurred, here uhat1 states for residual term of the regression model

Correlation Coefficients, using the observations 1 - 110  
 (missing values were skipped)

5% critical value (two-tailed) = 0.1927 for n = 104

TotalRemittanc	TotalIncome	D_Minutes	D_Hours	TotalRemittanc
1.0000	-0.1945	-0.0650	0.1010	0.0372
	1.0000	-0.0915	-0.2045	D_Minutes
		1.0000	1.0000	D_Hours
D_BankAcct	D_Gender	D_Employed	D_IndustrySecto	TotalRemittanc
-0.1275	0.0921	0.1531	0.2248	0.0089
0.0540	0.0212	0.0428	-0.0547	TotalIncome
0.0560	-0.0085	-0.0434	-0.0715	D_Minutes
-0.0270	-0.0476	0.0840	-0.0967	D_Hours
1.0000	-0.0629	-0.0300	0.1207	D_BankAcct
	1.0000	0.1144	0.0490	D_Gender
		1.0000	1.0000	D_Employed
			1.0000	D_IndustrySecto
D_TemporaryResi	D_Dillegal	l_TotalCost	l_Age	TotalRemittanc
-0.2012	-0.1203	0.7584	-0.0595	-0.1417
-0.0866	0.2102	-0.2566	-0.0711	TotalIncome
-0.0557	-0.0020	0.1890	-0.0187	D_Minutes
0.1750	-0.0680	-0.0019	-0.0711	D_Hours
0.0293	-0.0150	0.0646	-0.0633	D_BankAcct
-0.1485	-0.0595	-0.0214	-0.1912	D_Gender
-0.0534	-0.0467	-0.0128	0.0791	D_Employed
-0.5844	-0.3406	0.1917	-0.1450	D_IndustrySecto
1.0000	-0.0648	-0.1678	0.1769	D_TemporaryResi
	1.0000	-0.0916	0.0312	D_Dillegal
		1.0000	-0.0142	l_TotalCost
			1.0000	l_Age
l_LengthofSta	uhat1	TotalRemittanc	TotalIncome	D_Minutes
-0.2150	-0.5556	0.0000	0.0000	D_Hours
0.0468	-0.0000	0.0000	0.0000	D_BankAcct
0.0912	0.0000	0.0000	0.0000	D_Gender
0.0203	0.0000	0.0000	0.0000	D_Employed
0.2740	-0.0000	0.0000	0.0000	D_IndustrySecto
0.1186	-0.0000	0.0000	0.0000	D_TemporaryResi
-0.1894	-0.0000	0.0000	0.0000	D_Dillegal
-0.1359	-0.0000	0.0000	0.0000	l_TotalCost
0.1457	-0.0000	0.0000	0.0000	l_Age
-0.0108	-0.0000	0.0000	0.0000	l_LengthofSta
-0.0856	-0.0000	0.0000	0.0000	uhat1
-0.0539	-0.0000	0.0000	0.0000	
1.0000	1.0000			

## TEZE BP

UNIVERSITAS CAROLINA PRAGENSIS  
založena 1348

Univerzita Karlova v Praze  
Fakulta sociálních věd  
Institut ekonomických studií



Opletalova 26  
110 00 Praha 1  
TEL: 222 112 330,305  
TEL/FAX: 222 112 304  
E-mail: [ies@mbox.fsv.cuni.cz](mailto:ies@mbox.fsv.cuni.cz)  
<http://ies.fsv.cuni.cz>

Akademický rok 2010/2011

### TEZE BAKALÁŘSKÉ PRÁCE

Student:	Tuvshinbat Dorj
Obor:	Ekonomie
Konzultant:	Doc.Ing. Tomáš Cahlík CSc.

Garant studijního programu Vám dle zákona č. 111/1998 Sb. o vysokých školách a Studijního a zkušebního řádu UK v Praze určuje následující bakalářskou práci

Předpokládaný název BP:

#### Analysis and survey on market for remittances in Czech Republic

Case study: Remittances from Czech Republic to Mongolia

Charakteristika tématu, současný stav poznání, případné zvláštní metody zpracování tématu:

The thesis examines market for remittances in Czech Republic from the perspective of existing or potential service providers. The thesis aims to capture key issues related to remitting behavior and the market for remittances, namely cost, disclosure and transparency, market behavior, expected shift in future choices, and links to banking and financial behavior and describes the remittance process, and classifies remittance transfer mechanisms. It also analyzes remittance flows from Czech to Mongolia and the consumers' cost. Furthermore, it evaluates the strategic positions of existing types of services. Finally, it assesses the efficient way of remitting for the immigrant workers and furthermore Mongolian immigrants.

## Struktura BP:

### Abstrakt

- introduction
- basic framework
- market behavior
- remittance mechanism in CR
- consumers' cost
- consumers remitting behavior
- remittance out flow from CR
- remittance flow from CR to Mongolia
- conclusion
- sources

### Osnova

## Seznam základních pramenů a odborné literatury:

- [http://www.econ.ucl.ac.uk/cream/pages/CDP/CDP\\_09\\_09.pdf](http://www.econ.ucl.ac.uk/cream/pages/CDP/CDP_09_09.pdf)
- <http://www.migrationonline.cz/e-library/?x=2188077>
- <http://www.eco.uc3m.es/temp/RemittanceDustmannMestresJan08.pdf>
- <http://www.migrationonline.cz/remittances/>
- [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6VBV-4VHGC35-1&\\_user=1490772&\\_coverDate=02%2F02%2F2009&\\_rdoc=1&\\_fmt=high&\\_orig=search&\\_sort=d&\\_docanchor=&\\_view=c&\\_searchStrId=1194333102&\\_rerunOrigin=google&\\_acct=C00053052&\\_version=1&\\_urlVersion=0&\\_userid=1490772&md5=ead29aa813dd754477aabc a93e08ccea](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6VBV-4VHGC35-1&_user=1490772&_coverDate=02%2F02%2F2009&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&_view=c&_searchStrId=1194333102&_rerunOrigin=google&_acct=C00053052&_version=1&_urlVersion=0&_userid=1490772&md5=ead29aa813dd754477aabc a93e08ccea)
- <http://www.econstor.eu/bitstream/10419/21307/1/dp1531.pdf>
- [http://epp.eurostat.ec.europa.eu/cache/ITY\\_OFFPUB/KS-RA-07-025/EN/KS-RA-07-025-EN.PDF](http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-07-025/EN/KS-RA-07-025-EN.PDF)
- [http://aa.ecn.cz/img\\_upload/6334c0c7298d6b396d213ccd19be5999/TRejskova\\_et\\_al\\_Remittances.pdf](http://aa.ecn.cz/img_upload/6334c0c7298d6b396d213ccd19be5999/TRejskova_et_al_Remittances.pdf)
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Datum zadání:	
Termín odevzdání:	

Podpisy konzultanta a studenta:

V Praze dne 10.02.2010