Mongolia: The Question of Poverty Amidst Socioeconomic Growth

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Abstract

The paper delves into the background of Mongolia, considering its history, geography, and political economy to find a theoretical connection between its high (and increasing) poverty rates and the phenomenal growth in socio-economic indicators ranging from the Gross Domestic Product (GDP) to the Human Development Index (HDI). Through an analysis of relevant literature and an evaluation of the principal theories of development economics, this paper explores the roles of employment on GDP, as well as that of dzuds (severe winter storms), and discusses the resilience of poverty despite strong economic growth. The paper arrives at the conclusion that Dualistic Development Theory (as articulated by Singer (1950)) best encapsulates Mongolia's woes, mainly due to a failure of Foreign Direct Investment (FDI) to become entrenched in the economy. This broadly explains why GDP grows (due to highly productive capital intensive FDI) while unemployment and poverty also grow (due to labor saving capital intensive FDI). Finding that Mongolia's FDI sector is tailored to benefit the source of the FDI rather than the denizens of the country, this investigation further asserts the that dzuds are unique hurdles that disincentivize domestic saving and investment, regularly vanquish assets, negatively influence migration patterns, and place overwhelming binding constraints on Mongolia. This paper concludes with policy prescriptions for using FDI as source of pro-poor growth through establishing stronger linkages with the economy, establishing joint ventures and public private partnerships, developing complementary domestic industries, diversifying Mongolia's exports and de-emphasising mineral extraction, all the while placing enormous emphasis on rural enrichment and integration along with dzud mitigation stratagems.

Keywords: *Mongolia, FDI, poverty political economy, development*

I. Introduction

An ancient land eclipsed by its two behemoth neighbors in scholarly discourse, Mongolia receives an inordinately low amount of attention in research investigating international development. Mongolia is a particularly interesting case study because it naturally controls for a large number of variables that are linked both theoretically and empirically to socioeconomic development, either as spurs or inhibitions, allowing researchers to narrow down the possible causes of myriad phenomena. The literature in political economy abounds with research showing the negative effects of ethnic heterogeneity on provision of public goods (Habyarimana 2007), and the positive effects of widespread education and literacy on socioeconomic growth (Hull 2009). Academic scholarship conclusively illustrates that infrastructure development can effectively combat poverty (Calderón and Servén 2004), and that expectations of growth and industrialization can be self-fulfilling (Dov 1990), especially where prospects exist. Democracy has been shown to be strongly and positively correlated with economic development (Boix 2011), [1] and free media (and other coordination goods [2] that build social capital[3]) impact sociopolitical development (De Mesquita et. al. 2005), which is theoretically and empirically linked as having a mutualistic relationship with economic development (Fukuyama 2002).

Mongolia is thus a useful place to investigate because it is an ethnically homogeneous democratic nation, with vast untapped mineral resources, and a relatively high level of infrastructure. Mongolia has almost universal literacy (for both genders), is highly rated on its electoral process, pluralism and civil liberties, and demonstrates fantastic recent economic growth and attractive prospects. Thus, the above listed phenomena commonly used as reasons why a given country suffers considerable development challenges fail to explain Mongolia's circumstances, and as such, Mongolia controls for the effects of these factors. Poverty remains endemic, and has not reduced nearly in proportion to the growth of Gross Domestic Product (GDP) per capita

[1] Though there is no overarching consensus on the direction of causality and much discourse over potential other co-determinants.

[2] "Public Goods that affect the ability of political opponents to coordinate but that have relatively little impact on economic growth" (de Mesquita and Downs, 2005).

[3] "Shared norms or values that promote social cooperation, instantiated in actual social relationships" (Fukuyama, 2002)

— even though the above listed factors are in Mongolia's favor in its quest for poverty alleviation. The nation raises interesting questions when researchers consider, both in theory and in practice, the determinants and constraints of sustainable socioeconomic growth. Particularly, in considering whether Mongolia is an exception to these factors, whether these factors are necessary but insufficient determinants, or whether the prevailing theories are lacking, and why — research into the political economy of development stands to benefit from further investigation into the dynamics of Mongolia's development process.

This paper aims to contribute to the literature on Mongolia and the broader disconnect between development indicators and actual development through a) a succinct background on Mongolia's history, geography, industry and economy, b) a review of the literature on the nation's development progress and challenges, c) a consideration of the reigning paradigms of development economics and their applicability and limits in evaluating Mongolia's situation, d) a deep contemplation into why the Dualistic Development theory (as articulated by Hans Singer) offers the most suitable theoretical explanation of Mongolia's circumstances, and e) potential policy implications that may redress some of the issues. This will be an outlook on some of the binding constraints unique to Mongolia that have a significant impact on the socioeconomic and political landscape of the country; in particular, the distinctive scourge of *dzuds* — exceptionally severe and recurrent winter storms that can last for months and can have devastating impact on the nation, from its physical assets and productivity, to the incentive structure of the populace.

However, before delving into Mongolia's specific situation, it is important to establish explicitly some of the concepts under consideration in this paper, and how this paper shall use them, most salient of which is poverty. A highly subjective and fluid notion, poverty — and in particular its assorted statistics — can infer and represent a variety of ideas that vary with context, and thus can present problems in application. Because of its widespread (and often callous) usage, it runs the risk of being redundant if not explicitly defined. Poverty, as it applies to Mongolia and as this paper shall use it, refers to the definition used by the *Participatory Poverty Assessment* in Mongolia (National Statistics Office of Mongolia 2006), published by the Mongolian National Statistics Office in 2006:

> "[Poverty is] lacking the means to make a living; lacking sufficient nutrition; not being able to access sufficient healthcare [...]; not being able to assure education for children [...] The poorest [are] those without assets, without homes, and with very little access to livelihood opportunities and services" (National Statistics Office of Mongolia 2006:3)

While other aspects espoused range from lacking access to credit and being unable to weather economic shocks, to lacking social networks or means to survive the -48-degrees-Celcius winters, these are all qualitative measures of well-being. Where quantitative measures are referred to, this paper shall explicitly define the criteria in footnotes.

II. Background

Mongolia is a landlocked country bordered to the south by China and to the north by Russia. With a 2012 population of 3,179, 997 in a land area of 1,564,116 sq km, the official 2010 population density of Mongolia is 1.7 people per square kilometer, making it the least densely populated sovereign nation in the world. Mongolia has a rich history that climaxed in the 13th Century, with the formation of Chingis Khan's Eurasian Empire. In 1921, Mongolia gained independence from China, and with assistance from the Soviet Union, adopted a communist one-party state which maintained close ties to the USSR until the USSR's demise in 1989. So close were these Soviet-Mongolian relations throughout the period, "Russian officials [...] thought of Mongolia as the former '16th Soviet Republic' (Luzayanin 2012)." Since 1990, Mongolia has peacefully transitioned into a democratic multiparty state with a parliamentary unicameral legislature where the Head of State is the President, and the Head of Government is the Prime Minister.

As with many aspects of the country, Mongolia's geography is varied and particularly unique. It is ringed by successive mountain ranges extending from the south and south west to the north east, and the expansive Gobi Desert occupies its south-eastern border and interior. Mongolian weather is extreme; with a high altitude and latitude, the temperatures can vary as much as 30 degrees Celcius in one day. Mongolia's capital, Ulaanbaatar, is the coldest capital city in the world, averaging -1.3 degrees Celcius throughout the year (Rosenberg 2012). Geography and climate are exceptionally important factors in Mongolia's socioeconomic development. Only 1 percent of the country's land is employed in crop production, and "because of the long cold winters, only a single crop is possible."

Also, Mongolia is extremely vulnerable to 'dzuds' — harsh winter droughts and severe winter storms that oc-

cur *every two to three years* (Begzurusen 2004), the most recent of which (in 2009/10) killed "over 7.8 million head of livestock" (Food and Agriculture Organization of the United Nations 2010), a proportion that constituted "nearly a fifth of the nation's livestock" (UNDP 2011). This caused the prices of meat to double, feeding into inflation and further weakening an economy considerably damaged by the 2008/2009 Financial Crisis (Habib et al. 2011). Furthermore, the dzud "increased maternal and child mortality" and the homes of 28 percent of the country's population were declared "disaster zones" (UNOCHA 2010). Sixty percent of the entire country was covered in thick snow, and animals, the essence of the nomadic pastoral agro-economy of Mongolia, were unable to feed for months (Food and Agriculture Organization of the United Nations 2010).

Despite this, Mongolia has made considerable progress on the economic and industrial frontier. With a Gross National Income (GNI) per capita growth rate of a staggering 16.51 percent in 2011, if Mongolia can maintain such a growth rate, basic estimation based on the current growth rate would surmise that Mongolia would double its 2011 GNI per capita of $4360 at Purchasing Power Parity (PPP) in 4.24 years. Mongolia's main industries are extraction of minerals such as coal, gold, tin, fluorspar and copper (Smith 2008), which are fueling Mongolia's economy, primarily through foreign investment, which has led to a mining boom. Home to one of the world's largest untapped copper deposits, Mongolia has the highest industrial production growth rate in the world — at 37.3 percent.[4] Mongolia's mining and mineral sector contributes 27 percent of its GDP (Embassy of Mongolia 2009). Considering that all its industry contributes 32.6 percent of the GDP, we can infer that Mongolia's mining sector makes up 82.8 percent of the country's industrial output. The remainder is covered by a small textile processing industry (Smith 2008), meat processing and construction (CIA 2012). The geological sector has attracted incredible foreign direct investment (largely from East Asia and North America), bursting from $2 million in 1992 to $43 million dollars in 2001 to $4.71 billion dollars in 2011, a 2050 percent and a 10853 percent increase between each period, respectively.

Noted as "the main pillar of Mongolia's development (Embassy of Mongolia 2012), "Mongolia's mineral sector is very vulnerable to fluctuations in international mineral markets, and thus Mongolia was forced to seek International Monetary Fund (IMF) assistance during the 2008/9 Global Financial Crisis (Langfitt 2012), to the tune of $236 million dollars. Mongolia's economy contracted by 1.3 percent in 2009, and experienced a negative GDP per capita growth rate of -2.88 percent the same year.

Table 1: *WolframAlpha Knowledgebase, 2012*

Economy	
GDP per capita per year	$1990 (2008)
GDP real growth per year	+8.86% (2008)
Gini Index (Inequality)	0.365 (2008)
Nominal Unemployment Rate	9.9% (2010)
Demographics	
Population (2010)	2.7mi
Population Density (people/km^2)	1.74
Population Growth (percent/year)	1.14
Life Expectancy (years)	67.7
Median Age (years)	25.3
UN Human Development Index (2011)	
Health [a]	0.765
Education [b]	0.722
Living standards [c]	0.505
Total	0.653
Poverty	
Poverty fraction at $1.25/day [d]	22.4% (2005)
Poverty fraction at $2.00/day [e]	49% (2005)
National poverty fraction [f]	39.2 (2010)
Rural poverty rate [g]	47.8% (2010)
Urban poverty rate [h]	32.2% (2010)
National poverty gap [i]	10.1% (2008)
Poverty gap at $2/day	17.24% (2005)

[a]Measured by life expectancy, using the actual observed minimum and maximum values for countries in the time series expressed as a value between 0 and 1.

[b]Measured by the mean of the years of schooling for adults aged 25 years and expected years of schooling for children of school attending age, expressed as a value between 0 and 1.

[c]Measured in GNI per capita (PPP US$), using the logarithm of income to reflect the diminishing importance of income with increasing GNI expressed as a value between 0 and 1.

[d]Percentage of population living on less than US$1.25 a day at 2005 international prices (PPP adjusted for 2005).

[e]Percentage of population living on less than US$2.00 a day at 2005 international prices (PPP adjusted for 2005).

[f]Percentage of population living below the national poverty line âĂŞ based on population weighted subgroup estimates from household surveys.

[g]Percentage of rural population living below the national rural poverty line based on population weighted subgroup estimates.

[h]Percentage of urban population living below the national urban poverty line based on population weighted subgroup estimates.

[i]The mean shortfall from the poverty line (counting the non poor as having zero shortfalls) as a percentage of the poverty line. This measure reflects the depth of poverty as well as its incidence.

Despite the growth of the mining sector, employ-

[4]That is, its industrial production doubles in size every 2 or so years.

ment in industry has decreased from 20.5 percent in 1993 to 13.7 percent in 2007. Because Mongolia's mineral sector is the key accelerant of Mongolia's economy, not only as a source of foreign exchange but also as a primary source of revenue for the Mongolian government and a vital investment interest for the nation, it is on the shoulders of this sector that many of Mongolia's aspirations lie.

Yet however important industry and mining are, they compose but one section of Mongolia's economy, in which agriculture also plays a large role. Eighty percent of the value of production in the agricultural sector is in livestock. This sector contributes 15.8 percent of the GDP, uses 33.5 percent of the labor, and is vastly pastoral, nomadic, and subsistence based. Forty-three percent of Mongolia population live in rural areas, a figure that is growing at roughly the same pace as the urban population growth rate (Trading Economics. 2012).

Nonetheless, the rural contributors to the agricultural sector are also subject to dire poverty. Mongolia's rural poor people are "scattered, isolated, and highly mobile [...] most rural poor people are herders (IFAD 2010)." The Food and Agriculture Organization (FAO) reports that "over 50 percent of rural Mongolians live in poverty (Food and Agriculture Organization of the United Nations 2010)" and the overall poverty statistics claim that up to 39.2 percent of Mongolians live below the national poverty line. Mongolia's official unemployment rate is has tripled in 5 years, from 3.3 percent in 2005 to 9.9 percent in 2010. Mongolia's economy suffered tremendously after the fall of the Soviet Union in 1990, which bankrolled a third of its GDP (CIA 2012). It was left in debt to Russia (Embassy of Mongolia 2009), suffered inflation levels of 268 percent (in 1993), food was rationed, entire government institutions closed down, social welfare ceased (Rossabi 2005), and poverty became entrenched.

In response to this, Mongolia initiated many programs to streamline economic and political reform with social welfare and tackling poverty, such as the World Bank and United Nations Development Program (UNDP) funded Poverty Alleviation Program launched in 1994 with the aim of reducing poverty from twenty-six to ten percent by 2000 (World Bank 1996) through pure market based interventions that emphasized temporary job creation. These largely failed, as the policies advised by the international donors stressed privatization and limits in public expenditure, and the program tried to shift the burden of social care onto the private sector, which barely existed (Rossabi 2005). It deliberately failed to provide sufficient social welfare (which backfired as the microcredit alternatives were extremely limited and did little to create jobs), and was beleaguered by problems of oversight and corruption and the imposition of regressive taxes. The program failed to appreciate the depth of poverty and was overoptimistic about what it could achieve such that the program constituted only a negligible fraction of the total foreign aid to Mongolia (Rossabi 2005). It was unable to provide a solution to the effects of inflation in the face of stagnant incomes, and was relegated to a secondary objective (Rossabi 2005). Overall, despite the program's efforts, the poverty rate increased to at least a third of the population by 2000. This was explained away by the World Bank-backed government who claimed that "limited economic growth had led to reduced job growth and thus to less progress in poverty alleviation (Rossabi 2005)." The government that came into power in 2000 even acknowledged that the figures for unemployment were significantly greater than previously stated: "the real number was 220,000, not the 40,000 or so registered as unemployed (Rossabi 2005)." It wasn't until 2006 that Mongolia's GNI reached 1989 levels, and it has more than doubled between 2006 and 2011. The failed intervention(s) and persisting poverty despite surging economic growth gives considerable insight into the fundamental misunderstanding that policymakers both at the supranational and governmental level have of the causes of poverty in Mongolia; thus, this paper's aim to reconsider the theoretical perspective through which Mongolia's case can be evaluated.

III. Literature Review

The United Nations Mongolia National Human Development Report of 2007, entitled *Employment and Poverty in Mongolia* (UNDP 2007), comprehensively reports on Mongolia's situation. Functioning on the premise that "there is no automatic link between growth and poverty reduction," the report posits that employment; and specifically, lack of decent employment — "characterized by working conditions and low-productivity that do not offer adequate compensation to allow families to rise out of poverty" — is at the source of Mongolia's chronic poverty. The authors argue that a multipronged approach that focuses on not just the number, but also the quality and location of jobs being created, and the capacity and employability of the Mongolian population with respect to the requirements of employers, will be most effective. The report shows that "most poor households are headed by people who are working". It states that international standards give the illusion that unemployment is not a problem in Mongolia, because they define employment as one hour of work a week. Yet the writers show that this is very different from how

Mongolians perceive employment, thus participatory surveys report unemployment rates of up to 30 percent, as people who work a few hours a week in the informal sector consider themselves unemployed.

The report recognizes the need for diversification and targets special groups such as the youth and women as key frontiers for Mongolia's future. The authors assert the inability of Mongolia's economic growth to solely generate good jobs for its people, and because not all jobs are alike, measures must be taken to ensure that Mongolian workers are able to take advantage of good employment opportunities by equipping them with the right skills through implementing the right policies. Furthermore, the report employs a Poverty Likelihood Ratio that measures the poverty incidence [5] of a given demographic against that of the overall population, facilitating simple comparisons of different demographics and their chances of being poor relative to one another and the average household.

Taking a markedly different approach, Richard Smith, in his 2008 paper entitled "The Problem of Mongolia: From Socialism to the Millennium Development Goals" (Smith 2008), details Mongolia's socio-economic, political and cultural history, placing particular emphasis on Mongolia's state of poverty and the trajectory that led Mongolia to where it is today.

Smith shows that Mongolia was the model socialist welfare state; socialism eliminated poverty even though Mongolia's economic base remained pastoral, and heavy Soviet investment, fuelled by USSR's 'petrodollars' post 1970 meant that "by the 1980's, Mongolians enjoyed guaranteed employment, pensions, universal education, [and] universal health care". While he offers proof that the process of liberalization and democratization brought about poverty and inequality, it is not democracy he blames: "[the people] agree that material life was better under socialism, but people are glad to have freedom." He asserts that this sentiment is useful in considering a holistic perspective of poverty, as "one may feel happier under freedom with fewer material goods than [they would living] with bureaucratic restrictions and fear of political persecution." This feeds into the more qualitative nuances of poverty as pioneered by Amartya Sen, who challenged that material possessions were a sufficient measure of well-being.

Compounded further by the fact that Mongolia had one of the highest external debt rates in Asia, Smith notes that the lack of government revenues due to virtually non-existent tax income meant that incentives were stacked against maintaining a social welfare state. Smith advocates for a Millennium Development Goals (MDG) targeted yet Mongolian-led, rather than donor led approach to poverty alleviation. In reference to Rossabi (2005), he notes an example of such an approach taken by a team of UNDP consultants who in 2001 demonstrated the need to target inequality as well as poverty, and the need to roll back many of the reforms imposed in the 1990's that were incompatible with Mongolia's socio-economic fabric. The team's efforts led to reintroduced tariffs, and focus was placed on supporting development with meaningful community participation. Smith states that even though a "traditionalist society [...] is hardly compatible with ending poverty," sustainable policies are those that explicitly integrate with Mongolia's nomadic traditions, closely related to Mongolia's steppe geography. Given that wealth and assets are stored and measured in livestock, these are factors that need to be considered in understanding Mongolian savings and investments habits and value systems, especially in the context of recurrent dzuds which heavily factor into the calculus of Mongolian norms.

In considering the effects of Foreign Direct Investment (FDI), Dashnyam Nachin's research on *Trends in International Investment Flows: Foreign Direct Investment in Mongolia* (Nachin 2005) details the sectors benefiting from FDI and source countries where the investment originates. Nachin shows that interest in Mongolia — most notably from East Asia, North America and Europe — has grown considerably even in the face of decreasing global inflows. Nachin links this increased investment in mining, trade and service sectors with legal and policy reforms that ease the ability to invest, and an improved business environment that provides incentives such as tax exemptions that liberalize Mongolia's investment regime. Other important factors to which the author attributes the increased FDI include the signaling effects of resolving Mongolia's debts to Russia, and the changes in the global markets that have increased the importance of China relative to Europe and North America. The research shows that between 1991 and 2004, Mongolia negotiated thirty-seven bilateral investment treaties and thirty-one double taxation treaties, with nearly 4,000 foreign investment companies being registered from seventy-five different countries over the period. The data Nachin presents shows a cumulative increase in FDI from $2.1 million in 1991 to $237 million in 2004, half of which went primarily to geological prospecting, oil exploration, and the mining sector. This fraction is composed of 264 foreign companies from thirty-one countries — Canada, China, the USA and Bulgaria being the principal investors as of

[5] Poverty Incidence represents the percentage of households in each group who are poor âĂŞ a ratio of 1 means that a household of a particular demographic is as likely as the average household to be poor, greater than 1 indicates a greater than average likelihood et cetera.

2004. Other sectors that receive FDI include Trade and Service (13 percent), Light Industry (6.7 percent), Banking and Finance (5.1 percent), and Agro-processing (4.3 percent), with other sectors including inter alia telecommunications and construction contributing the remaining 19.5 percent.

Looking specifically into Mongolia's resilience to economic shocks, a 2011 World Bank paper entitled "The Impact of the Financial Crisis on Poverty and Income Distribution in Mongolia" (Habib et. al. 2011) offers significant insight into the socioeconomic structure of Mongolia, comparing the nation's development indicators not only before, during, and after the crisis, but also looking at which sectors of society and the labor force are affected and in what ways, as well as including an analysis of the effect of the 2009/10 dzud. The paper looks not only at the projected output elasticity of poverty and output/growth-employment elasticities, but also pursues a complex 'macro-micro simulation model' in its methodology. In doing so, they show that "growth in Mongolia is driven by the manufacturing sector, that newly created jobs are likely to be in manufacturing" and that "the sectoral share of agriculture in employment is expected to fall as the economy grows."

However, not only is "employment growth expected to be slow despite significant growth in output [...] as employment in industry and service expands, income growth [in those sectors] does not rise rapidly"; rather surprisingly, increased labor productivity and reduced rural poverty would be significantly aided by job creation in the non-agricultural sectors. Using projections with/without dzud to compare the income levels, the authors demonstrate that the dzud has a significant economic effect especially in the rural/agricultural areas, where it effectively vanquishes all the potential gains of savings and long term investments. The analysis indicates that the growing inequality is skewed in that "those who become poor [...] are *more likely to live in urban areas* and work in industry and service sectors *than those who rise out of poverty*" (emphasis added) during and after the crisis, recommending that "special attention be paid to employment creation potential" given the fact that "nearly all the increase in poverty is due to losses in labor income".

The paper adds to the revelations in the 2006 *Participatory Poverty Assessment in Mongolia* (National Statistics Office of Mongolia 2006), which placed significant emphasis on the effects of dzuds (and the droughts they often cause) on the psyche of Mongolians, their incentives for saving, migration, and investment, and their inability to escape the poverty trap that dzuds help perpetuate. Dzuds are the primary cause of rural-urban migration because people who lose their livestock are left without means to survive in rural areas. Without the skills to live in urban areas (which lack opportunities for work), they are left without funds to relocate to rural areas and are forced to settle informally "on vacant land where they erect their *gers* (portable homes)" if they have any. This is evidence of the unique nomadic lifestyle unsuitable for urban living: 60 percent of Ulaanbaatar's population reside in poor urban settlements dominated by *gers*, settlements where almost 80 percent of migrants live. Here they lack roads, power, and transportation, as well as essential water supply, sewerage and sanitation. Thus understandably, the urban poor were poorer than the rural poor, and housing and food scarcity were more urban, rather than rural problems.

Considering that this was written before the 2009/10 dzud:, "a series of dzud and droughts from 1999 to 2003 resulted in the death of [...] 11.4 million, or 25 percent, of the national herd," adverse geography and climate should be treated with serious consideration as a chronic issue and not a one-off disaster. Temperature ranges from -48 to 38 degrees Celcius in the same year means that energy/fuel costs are the bulk of all expenditure through the cold seasons at least half of the year, and food is often substituted for fuel. Income only emerges once a year when wool/cashmere is sold (in the agricultural sector) and many of the urban poor are destitute and live underground and in sewers (especially in the winter) and do odd jobs like garbage collection. Little wonder that despite the economic growth, the report showed that Mongolian people expect poverty to increase in the future.

The trends seen through these selected pieces of literature extend also in other literature sources about Mongolia's endemic poverty. Both peoples' perceptions and the statistical data indicate that poverty and inequality are growing despite the increasing GNI per capita and foreign investment. Much of the literature places emphasis on the missing links between the people and the national income — valuable employment, and with it, employability, valuable income, savings, and the necessary public goods provision in order to translate the increased national wealth into increased wealth of the people. That we see very little of this indicates not only market imperfections, inequality and the myriad of micro-level issues that aggregate to keep Mongolians in chronic poverty; but also a macroscopic yet fundamental issue with how Mongolia has developed and continues to develop.

Overall, the evidence shows that the employed are far less likely to be poor than the unemployed, but the unemployed still make up only a small fraction of the

poor. It reveals that a large portion of the poor in Mongolia are the 'working poor' as opposed to the unemployed. The facts emphasize that poverty is a substantially more extensive phenomenon than unemployment (UNDP 2007). Yet despite this, policy recommendations assert that increased quantity and quality of work is the principal means by which economic growth can lead to poverty being ameliorated, and that employment is the fundamental bridge between economic growth and poverty reduction (UNDP 2007). If poverty is more than just unemployment, and employment does not guarantee escaping poverty, how can a poverty reduction strategy centered on employment change the fortunes of Mongolia? If creating better jobs is the key to reducing poverty, how does this fit in with the aspects of poverty that do not stem from unemployment and underemployment?

IV. Mongolia and the Paradigms and Theories of Development

A key undercurrent of Mongolia's political economy is the existence of dualism in every sphere. The niches of wealth that coexist and persist in the sea of poverty, the pervasive distinction between rural and urban, the perpetuation of high-productivity and low-productivity sectors of the economy and the labor force, the persistence of informal and formal economies, and the dissimilarity between international and domestic investment show that the dualistic nature of Mongolia's economy is not transient, but constant and chronic. This is salient in Mongolia particularly because such levels of economic growth and productivity are commonly associated with and theoretically linked to dynamism in all of these spheres. While Mongolia shows little evidence of such movement, where it does move, it moves in the direction contrary to what is expected. This is evidenced by the peculiarity of economic growth occurring in tandem with the expansion and deepening of poverty — a peculiarity that challenges reigning models of development and lies at the heart of this paper's investigation. Other peculiarities exist, for example that "herding has seen a doubling of the number of herders since 1989 while with the number of livestock remaining constant" (Smith 2008). This occurs despite Mongolia's astonishing economic growth outside the agricultural sector, and the low value and productivity of herding. This relates to a broader fact that agriculture pays nearly half the mean national wage, despite the reality that productivity of labor in agriculture is less than half the national average.

These are considered peculiarities because the expectations are based on prevailing theories that would not predict such outcomes. Thus before assessing the applicability of the theories in development economics to Mongolia's circumstance, it is necessary to understand why the various theories and paradigms that do not fit Mongolia's development trajectory. Hence there is a necessity for a detour to explain the prevalent models of international development and development economics.

Theorizing on international development has gone through a lot of evolution since the incipience of mercantilism in the 16th century and the founding of classical economics in the 18th century, but the most significant theoretical thrust in development economics arose in the 1950's, as academia considered the post World War II reconstruction vis-à-vis the spread of communism and the beginning of decolonization. The theories formed during this decade form the foundational pillars for the major schools of thought in development economics today, with the seminal papers/books by Arthur Lewis, Robert Solow, and Hans Singer being the basis for the Structural Change models/theories, Neoclassical Growth models/theories, and International Dependence models/theories,[6] respectively. These have developed into competing schools of thought that have gained and lost favor at different times over the past 60 years. While numerous other models have emerged,[7] none have as yet developed into overarching schools of thought central to the discipline, and the vast portion of subsequent modeling, theorizing, empirical study and scholastic debate has its basis in these fundamental theories. While pioneering and influential works on rural-urban migration and urbanization such as the Harris-Todaro Model would find themselves highly applicable to Mongolia's situation, this paper shall consider only the above stated three basic theories of economic development as they have the most coherent and relevant theoretical framework in assessing their applicability and explanatory power of Mongolia's circumstance.[8]

[6] In Singer's case, his work is most appropriate to the dualistic development sub-school of international dependence theory.

[7] The tide of development studies has seen a concerted but not yet dominant shift towards the primacy of politics and political institutions over pure economics in development, and the importance of social capital and path dependence, see Putnam (1993), Acemoglu et al. (2006), De Mesquita (2000). Moreover, there are many highly elegant contemporary models/theories using multiple equilibria, coordination failures, positive assortative matching (as used in O-Ring Theory), and Game Theory, as well as equally old models such as the Big Push Model and the Linear Stages of Growth Model (see Todaro and Smith, 2012).

[8] This is primarily because these theories are the closest development economics has to potential candidates for a widely accepted and cited doctrine — which development economics does not have.

I. Lewis' Two Sector Model

In Arthur Lewis' Two Sector Model,

> "The underdeveloped economy consists of two sectors: a traditional, overpopulated rural subsistence sector characterized by [...] surplus labor in the sense that it can be withdrawn from the traditional agricultural sector without any loss of output — and a high productivity modern urban industrial sector into which labor from the subsistence sector is gradually transferred." (Todaro and Smith, 2012)

As the modern sector, which pays more than the traditional sector, absorbs surplus labor, it expands, and this promotes industrialization and stimulates sustainable development, with investment to keep it growing coming from the profits that capitalists make. This continues until all the surplus rural labor is absorbed in the new industrial sector and new workers can only be drawn from the agricultural sector at a higher cost — a position known as the Lewis turning point (Todaro and Smith, 2012).

Many aspects of Mongolia's political economy correlate with or support Lewis' assumptions. For one, the agricultural sector is very poor; the poverty likelihood ratio of a person employed as a herder is 1.09 (Todaro and Smith, 2012). This means that herders are 9 percent more likely than the average family to be poor. Moreover, the agricultural sector pays far less in terms of wages than does the modern sector. The real monthly salary in the agricultural sector in 2006 was 44.5 thousand Togrogs ($32) compared to 98.8 thousand Togrogs ($70) in mining and 172.8 thousand Togrogs ($124) in financial intermediation. Bearing in mind that "job creation in the non-agricultural sectors, by attracting workers away from agriculture would contribute to raising labor productivity and reducing poverty in the agricultural sector" (Habib et al. 2011), this implies that either there is a negative marginal productivity to labor in the agricultural sector or that, at best, Mongolia is at a Lewis turning point. In addition to this, "labor productivity in the mining sector is more than seven times the national average (UNDP 2007)" and over fifteen times more productive than agriculture, providing a further bolster to a Lewis Model approach to Mongolia's development.

While the Lewis Model does give us insight into a theoretical examination of Mongolia's development, the results that it anticipates are not witnessed anywhere close to the degree that they theoretically should; indeed, Mongolia has developed in many ways against the expectation Lewis' model predicts. Lewis expects that people move from the agricultural sector to the modern sector due to the higher wages there, and Mongolia has indeed witnessed "an explosion of urban population (UNDP 2007)." However, their movement there has not translated into the expected rise in income and they enter into a new urban poverty. Chronic poverty has deeper roots; on one level, Lewis' assumption that profits in the modern sector would be reinvested, and that this sector could infinitely absorb the surplus labor theoretically fails to account for labor saving investments and capital intensive production. Mongolia proves this theoretical failure of the model. Mining and manufacture are both the leading sources of output, income and productivity, but mining is "highly capital intensive and does not directly generate enough employment to make mining a source of pro-poor growth (UNDP 2007)."

Hence urban poverty is a phenomenon that Lewis' model cannot explain, caused by the enormous barriers to transferring into the modern sector, and the capital intensive nature of the high-productivity sector. This is because the labor saving investment not only monumentally increases productivity; but also increases unemployment, and means that those who are employed are employed in low wage/non-productive sectors. The effect of this is vast and growing inequality, and that "a large share of the benefits of growth is going to those already well off (UNDP 2007)." In Mongolia, it is particularly salient that "there are important differences in the characteristics of those that fall into poverty [...] and those that exit poverty" (Habib et al. 2011). Those vulnerable to falling into poverty during crises "are much more likely to be urban and employed in industry or services than either the chronic poor or the non-poor (Habib et al. 2011)," which is especially disconcerting when one considers the debilitating effects of Mongolia's dzuds on its agricultural sector.

II. Solow's Neoclassical Growth Model

Given the serious impediments of the Lewis Model in explaining Mongolia's development path, considering Robert Solow's Neoclassical Growth Model could help shed light on some of these shortcomings. The Solow Growth Model is one "in which there are diminishing returns to each factor of production but constant returns to scale. Exogenous technological change generates long-term economic growth (Todaro and Smith 2012)." This means that for each factor of production

[9]The inclusion of which made Solow's Model particularly revolutionary.

(i.e. capital and labor [9]), an additional unit yields less output than the last, holding all else constant, but together (i.e. allowed to increase with the other), the output has a constant yield per each increment of both factors. As a result, capital should flow from places where it is in abundance to where it is scarce because returns on investments are higher, and nations should converge in incomes (if they are open economies). Poor countries should grow faster than rich ones, and in the long run, due to the diminishing returns, growth should be zero. Because the capital per worker depreciates at a constant rate and each additional unit of capital increases productivity with diminishing returns, there comes a point where adding an additional unit of capital becomes more costly than useful. This point is known as the steady state. In the short run, the further a nation is from the steady state, the faster it will grow, and in time it will catch up, its growth slowing as it approaches the steady state, at which point growth will be zero. Solow explains the existence of long term growth through technological progress, which is determined by non-economic factors.

In Mongolia, this capital transfer from rich to poor is seen by the huge change in foreign direct investment over the past decade, from $43 million dollars in 2001 to $1.4 billion dollars in 2010. This correlates with the increased GDP per capita; and allows one to make the claim that Mongolia is rapidly moving towards its steady state as the capital per laborer increases. Hence in the foreseeable future, Solow's model would justifiably lead us to believe that increased capital would increase the output, assuming that Mongolia is far from its steady state. This is a fair assumption considering the blistering pace of Mongolia's economic growth. The capital influx, however, is not simply a result of Mongolia having little to begin with and investors locating the capital there due to potential marginal productivity gains. Mongolia's rich natural resources attract foreign direct investment, and because of the exceedingly capital intensive nature of the investment, the actual development of the country due to this is minimal. Solow's model does illustrate Mongolia's development in terms of the correlation between investment and economic growth, but there is a conceptual flaw in the conclusions this model suggests.

In reality, increasing GDP per capita does not translate to increasing income per laborer, and thus on paper Mongolia appears to be growing and its citizenry getting wealthier, while in fact the poverty becomes chronically prevalent. The people who gain from investments made in Mongolia are the investors, who are not the Mongolian people. Because the wealth of Mongolia is mineral and its extraction is capital intensive, and the investors are foreigners, the profits that are not spent in capital-based investments do not remain in Mongolia, except for the royalties that the government gets. Solow's model therefore offers considerable insight into the dynamics of investment vis-a-vis Mongolia's economic growth, but suffers from a misinterpretation of the incentives of investors and is negligent of the connections between economic growth and human development as is witnessed in Mongolia.

III. Singer's Dualistic Development Model

As a result, considering the dualistic development thesis of the international dependence school of thought may help redress the inadequacies of Lewis' and Solow's models. Hans W. Singer's paper, "The Distribution of Gains between Investing and Borrowing Countries," presents the underlying hypothesis of dualistic development via international dependence.

> "Could it not be that in many cases the productive facilities for export from underdeveloped countries, which were so largely a result of foreign investment never became a part of the internal economic structure of those underdeveloped countries themselves, except in the purely geographical and physical sense? Economically speaking, they were really an outpost of the economies of the more developed investing countries. The main secondary multiplier effects, which the textbooks tell us to expect from investment, took place not where the investment was physically or geographically located but (to the extent that the results of these investments returned directly home) they took place where the investment came from. I would suggest that if the proper economic test of investment is the multiplier effect in the form of cumulative additions to income, employment, capital, technical knowledge, and growth of external economies, then a good deal of the investment in underdeveloped countries which we used to consider as 'foreign' should in fact be considered as domestic investment on the part of the industrialized countries." (Singer 1950)

The "multiplier effects" Singer refers to are the very aspects that Mongolia lacks. Because the foreign investment never fully integrated with the internal economic structure, Mongolia's economic growth only nominally belonged to Mongolia, but in reality the country is an 'outpost' for extracting wealth. The increasing economic

growth and foreign direct investment are thus but a smokescreen that overshadows Mongolia's growing socioeconomic troubles. The "dualistic economic structure: a high productivity sector producing for export coexisting with a low productivity sector producing for the domestic market (Singer 1950)" is the economic reality of Mongolia. Hence it is little wonder that there is a failure to "meet the migrants' expectations of finding decent jobs (UNDP 2007)" upon moving to the cities, because the cities are in effect little better (and as shown earlier, often considerably worse) than the rural steppe for the average Mongolian. The dualistic nature of Mongolia's economy thus perpetuates its underdevelopment.

However, Singer's thesis in particular suffers from a critical flaw in its theoretical, predictive, and prescriptive value — international dependence theses "give no insight into how countries initiate and sustain development (Todaro and Smith 2012)" and are thus more descriptive of what we see in the real world rather than mechanisms of how or why development occurs. Arguably, due to the descriptive nature of the model, it can be interpreted as showing but a particular point in time in a country's development, and thus does not illustrate a sustained mechanism. This leaves the thesis open to myriad potential conclusions of varying value and usefulness. As a result, a common conclusion drawn in dependence theory is that developing countries should become disentangled with developed countries and become either more autarkic or interact solely with other developing countries (Todaro and Smith 2012).

This conclusion, however, is not what Singer advocated or implied in his paper, asserting instead that

beginquotation "the purposes of foreign investment and foreign trade ought perhaps to be redefined as producing gradual changes in the structure of comparative advantages [...] rather than to develop a world trading system based on existing comparative advantages [by emphasizing] technical assistance to underdeveloped countries not necessarily linked with actual trade or investment [...] the most important measure required in this field is the reinvestment of profits in the underdeveloped countries themselves [because of] the necessity of some form of domestic absorption of the fruits of technical progress in primary production [...] international investment into the underdeveloped countries will contribute to their economic development only if it is absorbed into their economic system i.e. if a good deal of complementary domestic investment is generated and the requisite domestic resources are found" (Singer 1950).

However, the autarky argument has come to be perceived as a primary theoretical conclusion of the international dependence thesis,[10] providing a useful veil for straw man arguments against the theory in its entirety due to the many arguments about the ills of autarkic policy.

IV. Mongolia and the Merits of Singer's Dualistic Development Thesis

Singer's articulation of dualistic development reinforces the observations made earlier with respect to Mongolians' motives for rural-urban migration and the state of urban poverty, which differ from the neoclassical assumptions and predictions. The thesis is particularly powerful as two separate phenomena — the debilitating effects of foreign direct investment (FDI) forming clustered enclave economies that fail to improve the lot of Mongolians, and the devastating effects dzuds play in the rural-urban dynamic and in ensuring a consistently low-productivity equilibrium across Mongolia — can be explained within a single theoretical framework. Mongolia has unique binding constraints that significantly affect the incentives of its people where migration, urbanization, poverty, and modernization are concerned. While the search for employment is a primary motive for migration (Singer 1950), the reasons why they are searching for employment are far less obvious: "the need to look for livelihood, have access to services, and be near relatives (National Statistics Office of Mongolia 2006)" arise, but are not as important as the dzud.

> "Most migrants to urban areas are low income families that were severely impacted by dzud and were unable to recover from their devastating losses [...] most participants noted that after migrating, life had not changed for the better but often for the worse [...] however [...] they did not have a reason or the funds to return to the rural areas from which they came." (National Statistics Office of Mongolia 2006)

This is not only contrary to the neoclassical assumption that it was the allure of higher wages that led to their migration; it also sheds light on several important aspects. It helps explain the persistence of the dualistic rural-urban economy despite the wage differential, the similar population growth rates between the sectors, the high poverty incidence in the urban sector, and the reason why (as shown earlier) the urban populace are

[10] In large part because of the far more neo-Marxist leanings of the other two streams of international dependence theory; namely the Neo-colonial Dependence Model and the False Paradigm Model.

far more vulnerable to falling into poverty and far less likely to exit from it. Further, it shows that the adverse geographic climate is not just a 'fact of life,' but a critical underlying component of Mongolia's political economy. The dzuds help ensure that the agricultural sector remains unproductive and of low value, placing serious constraints on the socioeconomic development of the herders who have no supplementary skills (or access to them) with which to augment their income. They incentivize a low-investment equilibrium, because the expectation of a severe dzud every other year affects the levels of investment made today, limiting them so as not to lose everything when the dzud comes, hence incentivizing subsistence behavior. This is tragically counter-effective, because it reduces the probability of having enough livestock surviving an indiscriminate dzud to be able to salvage a living for a non-dzud year, increasing the likelihood of a complete loss of assets.

Additionally, on the FDI front, one is able to evaluate the usefulness of the dualistic development thesis as it applies to Mongolia's interesting situation. On "the most important contribution of an industry" Singer says, "is not its immediate product [...] and not even its effects on other industries and immediate social benefits [...] but perhaps even further its effect on the general level of education, skill, way of life, inventiveness, habits, store of technology, creation of new demand etc (Singer 1950)." Mongolia's industry has failed to have any useful effect on any of these factors, in part because the industrialization process has concentrated on sectors important to the foreign investors (whose primary interest is in extracting mineral wealth) rather than the nationals (whose primary interest is in improving their living standards), but also because precious little has been done on the government's side to ensure that this foreign investment is able to provide these benefits. This has had the joint effect of perpetuating the dualistic economic structure, the pervasive poverty, and the growing inequality. As a result, employers have "widespread dissatisfaction with the qualifications of job applicants (UNDP 2007)," and thus fail to hire them, effectively perpetuating the cycle of poverty. Thus the "fruits of technical progress" in the form of increased investment in industry which should be captured by the producers "in the form of rising incomes" are not being realized.

This paper's view is that of the three theories assessed, the Dualistic Development theory provides the best explanation to Mongolia's woes. Mongolia's increasing output growth needs to be felt by the Mongolian people, and it isn't being felt because the investments that have been made have not been targeted towards increasing Mongolia's people's development. The lack of entrenchment of Mongolia's burgeoning industry into Mongolia's economy means that the nation cannot benefit from its externalities. Thus the fact that "there is broad consensus that for many Mongolian men and women, economic growth is not yet fulfilling [the role of reducing poverty] (UNDP 2007)" makes sense. Similarly, we can understand the disillusionment towards Mongolia's economic future in that "youth adult groups estimated that the number of poor households would double in the next 5 years (National Statistics Office of Mongolia 2006)" despite projections for huge GDP per capita growth.

The dualistic development argument can be extended even further, in aspects of trade. When we consider that "high [commodity] prices prompted poor periphery countries to specialize in primary products [...] for the group of commodity boom countries such as Mongolia, these price shifts increased the incentive to specialize in fewer and less complex product mix (United Nations 2012)." An enormous 92.9 percent of Mongolia's exports in 2009 were "mineral products [...] textiles [...] and precious metal (Nachin 2010)," proof that these theoretical possibilities have become Mongolia's truth. "The risk [is] that the country could get trapped in specializing in economic activities that are more volatile and prone to rent seeking," a risk that should be taken very seriously if the impact of the 2009/10 Global Financial Crisis on Mongolia's economy is anything to go by.

V. Policy Implications

It is important to note that Dualistic Development Theory — at least as articulated by Singer — does not imply that Foreign Direct Investment (FDI) is inherently "bad," rather that it should be accompanied by independent technical assistance, reinvestment of profits, and absorption of international investment into the domestic economy by spurring complementary domestic investment. Considering how these aims can be specifically met in Mongolia to the potential benefit of the Mongolian people is a central aim of this paper. The policy frontier must take into account Mongolia's unique characteristics (i.e. its sparse population density, its nomadic traditions, and most importantly its recurrent dzuds), but also broader macroeconomic needs and dynamics that apply for all nations with high productivity enclave economies specialized in commodities whose prices are determined exogenously. Because Mongolia is an open economy, there exists significant potential to utilize the influx of multinationals and other forms of foreign direct investment as a pillar of Mongolia's pro-poor growth strategies. The idea of pro-poor

growth stratagems and policies are the type that Mongolia needs to focus upon as opposed to those that lead to higher GDP per capita; because the latter lose value as ideals and policies if they do not add value to the people.

Specifically, this should be thought of as follows:

1. Encouraging linkages [11] between multinational and domestic firms in providing inputs and tertiary services, possibly through tax breaks and other such incentives for firms which source inputs from or sell intermediary and final products to local firms, or by making linkage development an explicit criterion for investment in the country.

2. Increasing the number and depth/share of Joint Ventures (especially approaching parity) and Public Private Partnerships so that the government has a considerable say in how profits are spent, the local/foreign ratio of workers, training programs and opportunities, local subcontracting and outsourcing, and other company policies pertaining to the level of local engagement. [12]

3. Aiming to reduce export dependence and deemphasizing primary commodity extraction as the principle source of national income while using the royalties to create light manufacturing, labor intensive export industries to be used as intermediaries in the increasingly heavy manufacturing, labor saving industries of East Asia and Central Asia where a majority of Mongolia's FDI comes from — with the intention of diversifying Mongolia's exports, creating urban employment to reduce urban poverty, incentivizing FDI into non commodity sectors, and providing additional government revenue.

4. Targeting complementary domestic investments and enterprises through minimal requirements for microcredit for tertiary services such as retail and small and medium enterprises (SMEs) as well as long term investments/loans in real estate, construction, and complementary public works; with the dual purpose of increasing Mongolian participation, capacity and employment, but also incentivizing FDI sources to utilize local capabilities and assets.

In addition to reforming how the nation deals with and crafts policy towards FDI, Mongolia also needs to invest heavily in dzud mitigation strategies — including but not limited to

1. Engaging very heavily in traditional sector enrichment to combat inequality while increasing incomes through decentralization and rural integration programs that bring public services and infrastructure programs to rural areas, with the multiple intentions of:

   (a) Stemming the rural-urban migration in post dzud situations by creating widely distributed semi-urban centers in the rural areas,

   (b) Providing more integrated livestock and agriculture management through creating more accessible feed, slaughter, and storage facilities (thus combating recurrent drought through increased food security and allowing people who would lose everything to dzud to recoup a significant share of their wealth by being able to sell food they stored) thereby incentivizing long term saving

   (c) Diversifying the rural economy away from a completely pastoral one to a more service oriented one without feeding the problems of urban poverty and urban bias, and thus providing opportunities and incomes for people affected by dzud within the rural setting, thus increasing savings, through the creation of non-farm opportunities in rural industries and services.

2. This should be accompanied by specific interventions that can have immediate implications on the dzud affected populace, including

With these and other policies, farmers would be better able to maximise the number of livestock that survive each dzud and therefore forestall seasonal macroeconomic shocks. The heavy rural focus of these policy recommendations is considerably influenced by the preexisting urban nature of Mongolia, what with nearly 40 percent of the population living in the capital. This is because of the implications of urban job creation — considerably increasing urban incomes (via large scale urban job creation programs) over rural incomes will result in rural-urban migration increasing at a rate higher than urban job creation (due to expectations of higher

[11] "Connections between firms based on sales. A backward linkage is one in which a firm buys goods from another firm to use as an input; a forward linkage is one in which a firm sells to another firm" (Todaro and Smith, 2012: 173).

[12] Assuming, implicitly, that the government (and its agents and politicians) have the interests of their populace as their own (and thus primary) interests — a contestable assumption outside the scope of this paper

incomes) and thus paradoxically increasing urban unemployment (and poverty). [13] Considering that Mongolia's dzuds already incentivize rural-urban migration, and that urban poverty is significantly worse and harder to escape than rural poverty, policies that could increase rural urban migration and wage differentials need to be avoided, and semi-urban development in rural areas (and increased rural wages there — both farm and non-farm) should be pursued. This does not mean abandoning the existing urban poor who cannot relocate to emerging rural centers, but rather implies that highly targeted social relief programs rather than blanket job creation programs would be necessary to address these demographic needs.

VI. Conclusion

This paper finds not only are conventional explanations behind poverty and inequality such as initial inequality of wealth, unequal access to education, lack of democracy, and ethnic fractionalisation unable to explain the significant challenges Mongolia faces in addressing poverty, but also that the reigning structural change and neoclassical growth theories of development economics face considerable and insurmountable challenges in explaining Mongolia's development. The paper shows that even measures such as the Human Development Index, which is considerably more multifaceted than pure (and notorious) income and unemployment statistics, reports relatively good scores for Mongolia that mask the extensive challenges and chronic poverty its people suffer.

The findings reveal that of the major theories of development economics, the dualistic development thesis (as articulated by Hans Singer) presents the best theoretical explanation for Mongolia's macroeconomic challenges. This is because Mongolia's economic growth has been driven by considerable foreign direct investment, but the foreign direct investment has failed to derive benefits for the Mongolian people because it is tailored towards benefiting the source of the investment with virtually no externalities, spillovers, or linkages into the domestic economy; or even considerable direct and indirect employment impacts. This is as a result of labor saving capital intensive technology being employed extremely productively in a primary commodity market subject to internationally dictated, volatile prices. This, with the implicit support of Mongolia's economic policies, has led to the formation of high productivity enclave economies within the weak and developing domestic economy thus exacerbating inequality, creating poverty and vulnerability to externally produced shocks and resulting in a dualistic development that is excessively dependent on mineral exports.

Moreover, this paper finds that dzuds pose a unique challenge to Mongolia. These dzuds not only hamper food security and instigate frequent droughts, but also substantially affect inflation (in a society where animal products are fundamental consumer goods). They play a critical role in the calculus for rural-urban migration, and seasonally vanquish enormous portions of savings and investment (thus affecting the primary incentives for saving — especially in a nomadic culture where wealth and assets are stored and measured in livestock). They impact the motives for investment for herders, who anticipate a dzud with seasonal regularity, and thus limit their investment in their herds so as not to lose everything when the dzud comes. Yet this rational action is counterintuitive considering that limiting the investment reduces the chances of having any livestock that survives the dzud. They affect agricultural productivity in helping limit crop and cashmere production to just once a year, but also place considerable constraints on urban life — where the poor must spend huge portions of their low incomes on both food and fuel to be able to survive the winter months, leaving next to nothing for savings and investment for the vast majority of people.

In redressing this myriad of problems, increasing and promoting FDI is in Mongolia's best interests. This, however, must be done in a way that ensures that linkages are formed with the rest of the economy and that the FDI is able not only to have direct, indirect and externality benefits, but also multiplier benefits that are both within the industry and across other sectors of the economy. This is achievable through encouraging linkages with the local economy by incentivizing the use of locally sourced resources, intermediate goods and support services via tax breaks or explicit FDI policy favoring (or requiring) the use of local assets. This is further possible by increasing the number of Joint Ventures and Public Private Partnerships and the proportion of the share held by Mongolians or the Mongolian government in these partnerships. This can be bolstered by aiming to reduce export dependency on the mineral commodities by diversifying the exports through creating light manufacturing for the FDI source economies, and by incentivizing FDI into other sectors. This needs to be accompanied by investment in complementary domestic industries to allow them to be of greater value

[13] As detailed out in the Todaro Migration Model (Todaro and Smith, 2012: 338−342) — suppose 100 new jobs are created, there may be as many as 300 new migrants and therefore 200 more urban unemployed (assuming the 100 new jobs were not already taken by the people who were already in the urban centers).

to the FDI partners and by very heavy traditional sector enrichment to allow the people to be better able to handle the onset of dzuds as well as mitigate the ill-effects of rural-urban migration by incentivizing rural development and integration. Systems can be put in place to assist with mitigating dzuds; such as warning systems, cash transfer programs, and housing units.

In all, this paper re-emphasizes the primacy of unique local conditions and binding constraints in considering development policy as well as the unquestionable influence and role that FDI has to play in meeting the developmental needs of the world. It reasserts the disconnection between economic growth and poverty alleviation as well as re-emphasizing the detachment between common quantitative metrics of wealth, poverty and human development with the qualitative realities of these concepts. It shows that dualism is a real problem with very real implications, as is the danger of making assumptions and extrapolations about how countries will develop without comprehensively understanding them. Furthermore it offers policy prescriptions for dealing with some of the most important problems Mongolia faces in its quest for prosperity. However, this investigation is explicitly limited by its lack of consideration of many domestic, regional, and international political forces that have a solid theoretical and empirical basis as factors affecting socioeconomic growth — ranging from the impacts of widespread corruption to the role of China and Russia in Mongolia's internal politics — due to the restricted scope of the investigation. Likewise, a comparison with potentially comparable countries is not undertaken, and thus the investigation is openly not exhaustive of all possible considerations, leaving adequate space for further research into the country.

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