

The concept and theory of migration scenarios¹

Global Migration Futures Project

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1 Introduction

The short-term character of European public debates on migration has long been recognised and seen as problematic (Skeldon, 1990; Dustmann, 2007). The anxiety-ridden environment which has led to the gradual ‘securitisation’ of migration-related issues (Huysmans, 2000) has impaired the ability of policy makers and academics alike to develop long-term and critical insights into drivers of international migration. To be sure, relatively narrow responses to any given issue at the top of national and international policy agendas are by no means unique to migration. Yet this paper focuses on migration as an increasingly salient topic in today’s society. In particular it lays the basis for a theoretical framework of migration scenarios. The analysis herein stems from the Global Migration Futures project implemented by the International Migration Institute (IMI) at the University of Oxford.

The starting point of the project is that there is a need to make explicit taken-for-granted assumptions that frame the public debate and academic literature, and to reflect in a rigorous and internally coherent way on the certainties and uncertainties in relation to possible future migration trends. We will do so by applying the concept of scenario. Accordingly this paper has a twofold aim. First, it reviews the relevant literature on migration futures and scenarios. Second, on the basis of this review we delineate the main attributes of ‘scenario’ as a scientific concept to be applied to the study of migration and then present a ‘general theoretical orientation’ (Katzenstein, 1998) of migration scenarios. To do so, we will discuss relevant variables and causal patterns to explain and understand long-term drivers of migration. To the best of our knowledge, the concept of scenario has not been theorised in relation to international migration. Although, as we shall document below, scenario analysis has already been applied to migration (Organisation for Economic Co-operation and Development, 2009), it has remained rather limited and general in nature and has not linked scenarios development to migration theory. Hence, the current body of theoretical knowledge of forces driving international migration is commonly ignored in discussions about future migration. This paper contributes toward the broader aims of the Global Migration Futures project, which aims to deepen our understanding of future, long-

¹ This paper has been written with crucial support and feedback provided by Ayla Bonfiglio and Simona Vezzoli, both at the International Migration Institute.

term drivers of migration by applying scientific knowledge in a rigorous manner to counter-intuitive thinking of possible migration futures, and vice versa. Hence the main objective of this paper is to lay the theoretical foundations of the concept of scenario and illustrate some tentative applications in the area of migration.

2 Literature on migration futures

The exploration of future trends of migration is not new. In 1928 Gregory published *Human Migration and the Future* (Gregory, 1928). While Gregory did not explicitly address the question of future trends, he drew attention to the multiple drivers of migration at social, political and economic levels. Ever since, numerous scholars have considered the manner in which migration may change in the future (Bade, 1997; Levitt, 2007; Salt, 1992; Faist, 2000). At the cost of oversimplification, it can be argued that the discussion on the future of migration has mainly relied on more or less linear projections of existing trends (Fertig, 2000; Layard, 1992; Straubhaar, 2001; Fertig, 2001; Organisation for Economic Co-operation and Development., 2001; Fargues, 2008). The traditional approach to exploring the future of migration is to use statistical data to analyse previous trends, make assumptions about the main relationships with several key variables, and forecast migration flows into the future. The advantage of this approach lies in the fairly systematic use of historical and current migration data. As we will argue, this approach is highly problematic since it ignores the highly uncertain context that affects migration trends and policies.

The effect of European enlargement on migration has long been subjected to different forecast exercises. As Erzan et al. (2006) observe, these have followed two models. Some research has been conducted through statistical inferences based on scientifically designed surveys and econometric methods (Alvarez-Plata, 2003). Against this background, Erzan et al. (2006) produced projections for immigration from Turkey to Germany considering demographic developments, urban and rural growth, productivity, internal migration and unemployment. This led to the development of two scenarios, one emulating for Turkey the actual experience of EU countries with free movement of labour, and the second repeating the experience of the guest worker agreements until 1973 (Erzan, 2006: 36). One of their conclusions is that 'it is possible that if Turkey loses the membership perspective, the EU may end up having more immigrants than under a free movement of labour regime with a prosperous EU-member Turkey' (Erzan, 2006: 43).

Likewise, demographic projections have often employed linear projections in order to assess future migration trends (Lutz, 1989; Lutz, 1992; Lutz, 2004). One example is the work of Hatton and Williamson. By investigating multiple determinants of migration they sought to 'speculate' about the future trends. In particular they addressed the following questions: 'Why has the pressure on world migration been on the rise? What economic and demographic fundamentals have been at work? Do we expect those fundamentals to rise even more in the future, or to abate?' (Hatton, 2002: 3). To do so they compared the experience in the age of 'free' migration before 1914 with the 'constrained' migration of more recent times. One of their main conclusions is that future trends 'are likely to be determined largely by policy choices'.

By using UN forecasts of the population size and age structure to understand net migration rates for African countries into the future, their projections suggest that 'migration pressure over the next 20 years should be increasing for demographic reasons

alone' (Hatton, 2002 : 23 - 24). In other words, they contend that 'if OECD countries think they have an immigration problem now, they are going to find the future even more challenging' (Hatton, 2002: 25). However, this is partly challenged in a subsequent study where they envision, with the exception of sub-Saharan Africa, 'a decline in the emigration rate from Latin America and the Caribbean, and a stable emigration rate from Asia, the Middle East and North Africa' (Hatton, 2009: 23). On this basis they conclude that 'in contrast with media hysteria and academic assumptions', their results 'support the view that there will be no mounting emigration pressure from the Third World over the next two decades, and a likely fall thereafter' (Hatton, 2009: 23). These forecasting techniques provide information for advanced planning that are considered to be superior to intuition alone. However, such approaches are not problem-free.

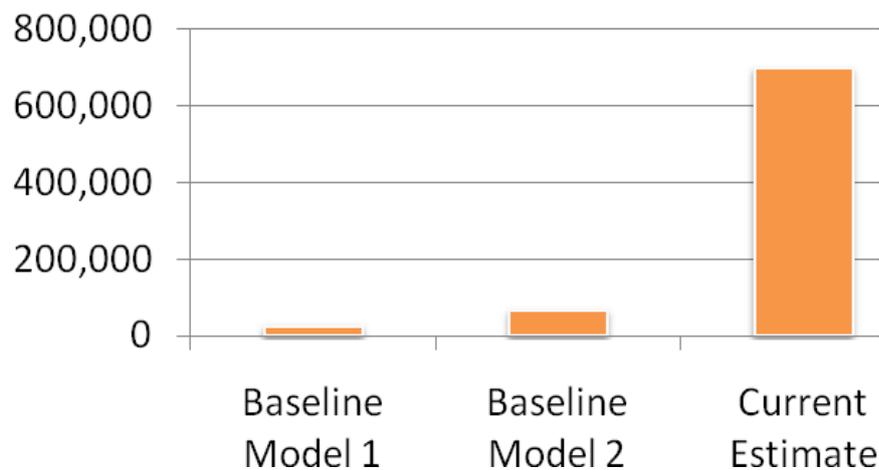
As a start, we must assume that the structure of our model remains the same across time. That is, we are assuming that the relationship between migration and its main determinants – the structure – is going to be the same in the future. There are no assurances that this will be the case and hence, we should not take this for granted. For instance, the demographic structure of the world population will fundamentally and radically change over the coming decades as a result of universal fertility decline, and will create an unprecedented demographic macro-context of which we do not really understand the consequences for migration, and which might make current 'transition models', which link demographic transitions and modernisation processes to migration transitions, increasingly irrelevant (de Haas, 2010). This means that we might need new theoretical models to understand future migration in order to fit them to the new global demographic, social and economic context. Likewise, we do not know the consequences of further technological progress on migration, as the effects of technology on mobility are inherently ambiguous (de Haas, 2009).

The second related limitation concerns data. The lack of data for certain migration corridors often implies that parameters of projection models must be estimated using historical migration data for other countries. This obliges us to assume the same structure across countries, an assumption which is difficult to sustain in reality. Following the same example, the parameters from the 1960s China–USA or Morocco–France migration model may not be useful to study 1990s Mexico–USA or Morocco–Spain migration. Moreover, data is often inadequate given the narrow definition of a migrant (e.g. citizenship, country of birth, ethnic background, duration of stay). In many datasets, migrants just disappear from statistics as soon as they are given permanent residence or citizenship status. Likewise, official statistics generally do not capture irregular migration.

Nonetheless, even when there are data available we still face significant model uncertainties such as the ones explained in the conceptual paper (International Migration Institute, 2010), and that pertain to a limited theoretical understanding of the complex, multi-level drivers of the migration process. As a result of these limitations, too often future migration trends are explored using extrapolations of current trends without taking into consideration future cultural, economic and environmental change on the global level. Such structural changes are likely to lead to fundamental changes in the direction, volume and complexity of world migration, but cannot be easily accounted for using traditional forecasting methods.

Another example concerns previous attempts to predict the impact on migration to the UK of the EU accession of the A8 countries (Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia), and to anticipate the changes in migration at the end of the guest-worker programme in Germany during the 1970s. For instance, the UK decided to open labour markets to the A10 (the A8 plus Cyprus and Malta) countries on 1 May 2004. The report commissioned by the Home Office to forecast net immigration from the A10 to the UK after the enlargement of the EU states that ‘since these scenarios are based on rather high growth rate of the overall population in the AC-10, it seems safe to argue that these figures are predictions at the upper bound of potential immigration’ (Dustmann, 2003). Hence, they argued that the figures provided in the report should be considered to be the upper bound of net migration. According to their estimates net immigration to the UK from the A10 would have been ‘relatively small at between 5,000 and 13,000 immigrants per year up to 2010’. In fact, the two baseline projections were baseline model 1 = 4,872 and baseline model 2 = 12,568. Nonetheless, as shown in Figure 1 the estimates for September 2009 differed significantly from the ‘upper bound’ estimates of the report.

Figure 1: Predictions from the Home Office Report for UK Net Migration from the A10 and Actual Estimates until September 2009 based on Migration Policy Institute Report (Sumption, 2010)



This may lead us to ask: what explains the big difference between the prediction and the outcome? The analysis conducted in the Home Office report was a sound estimation. The statistical analysis was based on a solid approach which was carefully implemented. Nonetheless, the authors were confronted with a lack of historical data about migration from the A8 countries to the UK and as such had to estimate the parameters of their model using data for other countries. Moreover, the authors had to make strong assumptions about the decisions of other European countries in regards to opening their markets to the A8 workers. In sum, even with the best statistical models, exploring the future of migration remains a difficult task, as data is lacking and many macro-structural factors such as policies, international power relations and conflict are difficult to quantify or project.

Accordingly, an increasing number of scholars and practitioners have taken the view that traditional forecasting techniques are inadequate to study complex migration trends.

Linear projections expose the limitations of purely quantitative models (Böhmer, no date). As will be discussed further below with regard to scenarios, 'out-of-sample extrapolations' are often misleading since they are constrained to the short term (Lowell, 2009) and cannot take into account historical contingencies and (often non-incremental) transformations on the macro-structural level. As Lowell observes, projections can fall prey to unforeseen calamities such as 9/11 or can be stronger than actual rebounds (Lowell, 2009). Accordingly from different disciplines mixed methodological approaches have been employed to account for the uncertainties and complexities of migration drivers and consequences. One example is the work of Wolfgang Lutz on demographic projections in relation to migration.

Notably, Lutz has applied scenarios to population projections. While we shall define scenario at greater length in the subsequent sections, Lutz and Prinz's application is noteworthy. In their view, comparison of different scenarios understood as 'alternative if-then calculations' can provide a better understanding of what aspects of the population structure are rather sensitive to 'alternative immigration patterns and which ones would be hardly affected' (Lutz, 1992; Lutz, 1991).

Likewise, Zaiceva utilises the concept of 'scenario' to explore the 'potential' migration into the enlarged European Union (Zaiceva, 2006). One of her main findings is that 'the overall level of (legal and permanent) migration from the East within a decade after enlargement will amount to around 1 per cent of the EU15 population' and that by implication 'the legal introduction of free movement of workers in 2011 would not increase immigration significantly' (Zaiceva, 2006). It seems that there is still considerable confusion about the definition and meaning of scenarios, and particularly what distinguishes scenarios from forecasts and projections. The following will therefore review the history and methodology of scenarios, which was originally used in military and intelligence contexts and later applied in the business sector and policy planning. This will allow us in Section 4 to define the concept of scenario for us to investigate long-term drivers of migration.

3 The literature on scenarios

Over the twentieth century, scenarios gained ground across different fields. Three schools of thought can be identified. First, in the 1950s they were used widely in the US military and by intelligence agencies. For example, the US Department of Defence employed systems analysis to develop simulation models of future environments in order to investigate policy alternatives and their consequences (Raubitschek, 1988). This technique led to the explicit use of scenarios especially by the Rand Corporation, a research group evolving out of a joint project between the US Airforce and the Douglas Aircraft company in 1946. Interestingly, until the 1960s the Rand Corporation was engaged almost exclusively in defence management studies for the US Airforce and the CIA (Bradfield, 2005). As one of many strategies of Cold War politics, scenario building was used as part of the military mobilisation to deter, or respond to, possible enemy attacks. Outside the remit of military planning, scenarios were also applied to civil defence in the economic and political fields (Lakoff, 2007). In particular, the lynchpin of this methodology is linked to the work of Herman Kahn, one of the best known futurists in the twentieth century (Copenhagen Institute for Futures Studies, 2008: 12). Kahn was a founder of the Hudson Institute think-tank and came to prominence as a military strategist and systems theorist at Rand. Notably, Kahn developed the notion of 'systematic conjectures' to identify multifold trends of

possible futures (Kahn, 1967: 705). In his book *On Escalation*, he makes clear that some of his key objectives included the following:

1. Stimulate and stretch the imagination
2. Clarify, define, name, expound and argue major issues
3. Design and study many alternative policy packages and contexts (Kahn, 1965: xxiv).

Scenarios were thus a way 'to stimulate investigations' that would lead a person 'to probe further' (Kahn, 1965: xxiv). Simply put, Kahn's application largely relied on 'probabilistic modified trends'. As Wilkinson observes, these are to be located 'in the forecasting camp' since they are underpinned by assumptions of deductive logics, a concept of an objective 'environment' and associated with 'positivist metrics of effectiveness' (Wilkinson, 2009). Around the same time, a different interpretation of scenarios developed in the energy industry and came to be associated with Shell. This second school of thought is now known as the 'intuitive logic school'.

In 1967 Shell launched the 'Year 2000' study, a project to study the business environment that would exist in 2000. Scenarios were seen as a useful research tool beyond conventional forecasts (Bradfield, 2005). In these initial applications, scenarios were used to explore possible developments in the areas of oil scarcity, oil prices and general strategic planning. Within this school of thought major contributions were made by Pierre Wack (1985), Ted Newland and Napier Collins all working at Royal Dutch Shell in the 1970s. Wack and Newland believed that in order to make the future world tangible, they had to reach the part of the managers' minds that held their perceptions of the world (Mason, 2010).² In fact one of the defining aspects of the intuitive logic school is the centrality accorded to changing perceptions in relation to relevant variables (Wilkinson, no date).

Parallel to this, a third school can be identified. At the same time that in the US scenarios for the military were being developed, a French philosopher, Gaston Berger, founded the *Centre d'Etudes Prospectives* where he developed a scenario approach to long-term planning, which he named 'prospective thinking' or *La Prospective*. This approach was based on the recognition that 'classical' forecasting approaches had repeatedly failed (Godet, 1996; Bradfield, 2005; Godet, 1982). In making explicit the limits of quantitative models and the absence of neutrality of information, this school of thought put forward a creative approach to thinking about the future. As Godet illustrates, 'the future should not be envisaged in a unique and predetermined mode or as a continuation of the past: the future is multiple and uncertain. The plurality of the future and the degrees of freedom for human action go hand in hand; the future is not written; it remains to be built' (Godet,

² Here three types of scenarios have been produced: 1) predictive which answer the question 'what will happen?' According to the Copenhagen Institute for Futures Studies (CIFS), 'the starting point is an arbitrary development that represents either stability or a "certain" continued development in a specific direction'. This category also includes forecasts as 'extrapolations of the most probable future'; 2) explorative which answer the question 'what can happen?' 'These scenarios are about what could happen no matter what we consider probable or desirable'. These are of two kinds: 'external' are adaptive scenarios used to understand development in an organisation's strategic environment and 'strategic' focus on factors that can affect an organisation's strategic environment; 3) normative which answer the question 'how can a specific goal be reached?'. They include preserving and transforming scenarios. Preserving scenarios look at how a goal can be attained within the framework of the present rules or present structure. Transforming scenarios look at gaining an objective despite an unfavourable starting point (Copenhagen Institute for Futures Studies, 2008).

1982: 295). In other words, at the core of *La Prospective* is the appreciation that there is no unique model describing societal evolution and that future horizons are plural. Accordingly qualitative and quantitative methods are applied as part of a three-pronged approach.

First, the problem at stake is situated in its broadest environment to better understand the 'existing state of the system'. The second phase consists in the elaboration of the scenarios, where, using the results of the previous phase, the 'probabilities of realisation' of the various possible outcomes are obtained. This makes it possible to select from the most probable scenarios a reference scenario, which is then supplemented by the study of contrasting scenarios, i.e. optimistic and pessimistic ones. Third, taking into account the opportunities for change, the organisation identifies a number of different strategic actions (Godet, 1982; Godet, 2008).

Ever since, scenarios have been employed in a variety of different settings. Academics have used the concept to better understand different developments in the environment, and more specifically climate change (Malcolm, 2002). Scenarios have been used to investigate possible developments in terms of economic outlooks, health (United Nations Programme on HIV/AIDS 2005), energy (Robinson, 1982), transport and more broadly organisational change (Wilkinson, 2003). In particular it is useful to emphasize that scenarios have been extensively used as a managerial tool within organisations as a way to improve strategy development. Scenarios have been used to help executives to make 'companies more reactive, competitive and resilient' (Heathfield, 2007). They have been widely applied as tools to enable 'strategic conversations' within companies to improve the strategic decision-making process by identifying certain and uncertain driving factors of the future environment (Heathfield, 2007: 326). The process is designed in such a way as to establish a connection between strategy development and strategy implementation (Heathfield, 2007: 332). In this context, scenarios are used as tools for action. As Wack observed, 'if scenarios do not push managers to do something other than that indicated by past experience, they are nothing more than interesting speculation' (Wack, 1985). Accordingly, the process of scenario building is based on the 'knowledge of managers' deepest concerns' (Wack, 1985). By presenting other ways of seeing the world, scenarios allow managers to 'break out of a one-eyed view' (Wack, 1985). Through conceptual re-framing and re-perception of reality, scenarios have been used to foster 'strategic opening' and 'rediscover the original entrepreneurial power of foresight in contexts of change, complexity and uncertainty' (Wack, 1985: 150).

It is clear by now that scenarios have been defined and applied in multiple ways. The confusion arising from different, if not conflicting, definitions, characteristics, principles and methodological ideas about scenarios has been addressed elsewhere (Bradfield, 2005). In the remainder of this paper we seek to present a coherent definition of the concept in relation to migration and, in Section 5, set the basis for a tentative theoretical orientation of migration scenarios. We do so by bringing together the above-mentioned discussions on migration futures with that on scenarios.

4 Combining the two strands: defining the concept of scenario in the area of migration

Applying scenarios to migration is not new: a few past attempts at applying scenarios to migration have been made. For example, the OECD has produced an in-depth analysis of global migration scenarios (Organisation for Economic Co-operation and Development, 1987; Organisation for Economic Co-operation and Development, 2009). Through focus groups and by using data provided by OECD, six scenarios were produced, including: Progress for all, OECD large boom, Uneven progress, Globalization falters, and Decoupled destinies. In all these scenarios 'demand for migrants persists through the coming year, albeit at different levels' (Organisation for Economic Co-operation and Development, 2009: 41). The five scenarios were then applied to six regions – South Asia; China and South Eastern Asia; Africa; the Middle East; Latin America and the Caribbean; Russia and Central, Eastern and South-Eastern Europe – and generated 'diverse and complex range of outcomes'. Accordingly, the possible migration implications region-by-region and scenario-by-scenario were identified through focus groups conducted between July 2008 and December 2008. One of the central conclusions is that 'the demand for migration into the OECD is likely to rise or at least stay constant under the five scenarios' (Organisation for Economic Co-operation and Development, 2009: 219). However, this report overlooks both the role of civil society and the views of people from the 'South'. These represent areas for further development. Indeed, the conclusions of the OECD report raise one central question: to what extent is our vision of tomorrow the same as the OECD of today? To fully apprehend the extent to which migration may relate to future trends, more region-specific as well as outside-the-box thinking is needed. Substantive data from, and systematic engagement with, stakeholders across migrant-receiving countries may further enrich the picture of migration futures presented in the above-mentioned report.

In building upon the insights presented in the previous sections, we are thus able to make explicit the underlying features of scenarios and make the case for scenario as a novel scientific concept in order to better understand the long-term drivers of migration. To start with, how shall we define scenario as a scientific concept?

In following the approach of Gerring and Barresi (2003) in a selective manner, we shall now illustrate the 'minimal' definition of scenario which identifies the essential attributes that are necessary and therefore always present in the concept of scenario. The first step consists in obtaining a representative sample of formal definitions which is useful for our own purposes. Hence, on the basis of the conceptual excursus presented above, we propose the following definition as the optimal usage of scenario.

Paraphrasing Selin (2006), migration scenarios are *stories that describe different futures that are developed using methods that systematically gather perceptions and data about certainties and uncertainties*.³ They thus bring together, rather than create, knowledge in a serendipitous manner. This definition seeks to address the methodological confusion between scenarios and forecasts which has already been highlighted by numerous studies (Bradfield, 2005; Mason, 2010; Ramirez, 2008; Sharpe, 2007). As Lutz and Prinz (1992: 342) make clear, the focus on perceptions and uncertainties encourages

³ Uncertainties are a central aspect of our definition of scenarios and of the related methodology. This largely draws from the work of (Wack, 1985; Wack, 1985).

creativity, which is necessary given the fact that ‘the scientific analysis of migration is full of uncertainties’. In fact, much more than the other, more stable, demographic components of population change (mortality and fertility), migration depends on relatively short-term changes in policies, economic cycles and trends and other hardly predictable fields. In their words:

while in modern societies mortality tends to change very slowly from year to year and even fertility which is largely the result of individual behavior [...] migration intensities can double or quadruple from one year to another. And the European experience of the past five years is full of examples of such entirely unpredicted and very massive fluctuations in migration levels (Lutz, 1992: 342).

Having identified a formal definition of scenario of migration, let us illustrate the main interlocutors. In scenarios development, the involvement of a diverse range of stakeholders is essential so as to stimulate creativity and the confrontation of many different viewpoints from which to look at the same issue. The involvement of a wide range of experiences in the very *process* of developing scenarios is based on the approach developed by Shell as defined above. In particular, we define stakeholders as the wide-ranging group of people who have an interest and/or expertise in migration. Thus the process seeks to involve experiences and ideas beyond the narrow boundaries of migration studies. At its most basic, stakeholders work across the following sectors: international organisations, private sector, civil society and government. In terms of discipline, priority is given to areas which have a direct bearing on migration. This means that disciplines such as economics, employment, environment, energy, health, technology, gender, history, politics, culture and society matter in so far as they allow us to better understand the multiple and changing dimensions of migration.⁴ It is important to emphasise that stakeholders are key to the development of scenarios.

The selection of stakeholders impinges on the overall process since they are the key actors in identifying and shaping the stories developed. As Lutz observes, the results of projections depend on the specific assumptions made in a ‘rather informal way’ and reflect ‘expert opinion’ (Lutz, 2009: 1). This alerts us to one of the limits of the concept, i.e. it may impair transparent science-based reasoning (Lutz, 2009: 1).⁵ The process of selecting variables related to certainties and uncertainties may defy rigorous analytical approaches in so far as it is based on expert opinion gathered through focus groups. Related to this, one important question to be asked is ‘what stakeholders needs do we meet? Can these needs be met in other ways? Is it possible that end-user needs will change radically?’ (Copenhagen Institute for Futures Studies, 2008). Indeed those using the scenarios may be doing so out of choice or perhaps because they are required to do so, and people’s reasons for wanting

⁴ For more on the methodology please refer to the conceptual paper available here:

<http://www.imi.ox.ac.uk/pdfs/research-projects-pdfs/gmf-pdfs/global-migration-futures-conceptual-paper>

⁵As Lutz further notes, the problem with expert opinions is that they tend to be opinionated. This can result in all sorts of biases and distortions that are not desirable and do not necessarily reflect the best state of the art in the field. There is abundant evidence that experts tend to hold strong beliefs about the future which are at the level of emotions and intuitions. Of course whenever one has to rely on the view of people in one way or another this cannot be fully objective but one can move in this direction by making it inter-subjective and applying the standard scientific tools of peer-review and critical evaluation (Lutz, 2009: 8). It follows that the goal is not to prove such argument incorrect or empty in content but rather to make sure that the specified arguments actually refer to possible causal mechanisms and are specific enough to be falsifiable.

to engage with the scenarios may vary (United Nations Programme on HIV/AIDS, 2005: 201). To rectify possible errors and biases the scenario-building process also takes stock of scientific knowledge produced by academics and those leading the process. As will be made clearer later on, the process is inherently dialectical.

Let us examine its minimal attributes which are to be found in the manner in which scenarios perform. Perspectives of stakeholders are intended to reveal uncertainties about migration futures. This is done without recurring solely to extrapolation of past trends nor referring 'to migration potentials as a proxy for actual migration' (Lutz, 1992: 343). Thus the concept accepts the inherent uncertainty about future migrations and allows one to study the implications of alternative hypothetical migration patterns (Lutz, 1992: 343).

Accordingly migration scenarios are understood as 'processes' to develop a 'broad understanding of how trends and driving forces in the surrounding world are developed and interact' (Copenhagen Institute for Futures Studies, 2008: 8). By gathering a diverse range of insights from stakeholders they allow us to construct experience-based knowledge about the future (Copenhagen Institute for Futures Studies, 2008: 18) and become aware of underlying assumptions and limits of knowledge. As a dialogue-based process, scenarios allow us to rise above the choice of a single imagined migration future and create 'something new' out of our analysis of several scenarios and internally coherent knowledge (Copenhagen Institute for Futures Studies, 2008: 18).

It follows that migration scenarios are not forecasts. The process of exposing underlying assumptions framing our understanding of the drivers of migration helps us to reflect on multiple and overlapping 'possibility spaces' about the future of migration (Copenhagen Institute for Futures Studies, 2008: 18). In other words, the point is not so much to get it right as to have 'a set of scenarios that illuminates the major forces driving the system, their interrelationships and the critical uncertainties' (Wack, 1985: 150). The process is designed to uncover underlying expectations and allow researchers and stakeholders to open their minds to innovation and insights into new prospects (Copenhagen Institute for Futures Studies, 2008). 'We must work with uncertainties and several alternative visions of the future for our organizations using different scenarios before we develop a strategy' (Copenhagen Institute for Futures Studies, 2008).

The different steps of scenario building have already been illustrated (Copenhagen Institute for Futures Studies, 2008; Wilkinson, 2004; International Migration Institute, 2010). The same applies to the methodology tailored to migration scenarios (Organisation for Economic Co-operation and Development, 2009) and its limits (International Migration Institute, 2010). Hence while the project under way at IMI intends to contribute to this emerging field also in terms of methodology, it goes beyond the purposes of this paper to present a detailed review of migration scenario methodology. Yet one point needs to be emphasised that is central to the manner in which the concept performs. The defining feature of migration scenarios is the 'iterative process that encourages users and researchers to reflect on their individual and collective assumptions and understanding' (United Nations Programme on HIV/AIDS, 2005: 22). The dialectic nature of the process allows for reciprocal and mutual learning. Migration scenarios provide an opportunity for both researchers and practitioners to change their view of reality. Paraphrasing Wack (1985: 87), exposing and invalidating an obsolete world view such as the standard relation between migration and development as well as the direction of migration from Africa to Europe, is

not where scenario analysis stops. Reconstructing a new model is the most important job and is the responsibility of all stakeholders including academic researchers (Wack, 1985: 87). In short, by going beyond our comfort zone of assumptions potentially full of 'received knowledge', this reflexive process allows stakeholders to share knowledge, challenge and transcend given assumptions and develop a vision and a wider strategic thinking (Copenhagen Institute for Futures Studies, 2008: 24). It goes without saying that this is badly needed in the area of migration, where ideas and practices often tend to miss the big and long-term picture (de Haas, 2006).

5 General theoretical orientation of scenario in the context of migration

Having presented the concept of scenario in the context of migration, we will now discuss some of the factors commonly assumed to be major drivers of migration, particularly how they might affect migration in perhaps unexpected or counter-intuitive ways, and how future evolution of these drivers might fundamentally upset the migration patterns and trends as we know them today. To this end, this section integrates and amends insights from existing migration theories. This effort is to be seen as an attempt to achieve general theoretical orientation, which can be defined as an heuristic device making explicit relevant variables and causal patterns that provide guidelines for developing specific research programs (Katzenstein, 1998: 646). This framework intends simultaneously to capture some broader processes of global contextual change and investigate the possible effects on global and regional migration trends. This overview is illustrative rather than exhaustive, and mainly serves to illustrate the need to question and challenge common assumptions about current and future drivers of migration processes.

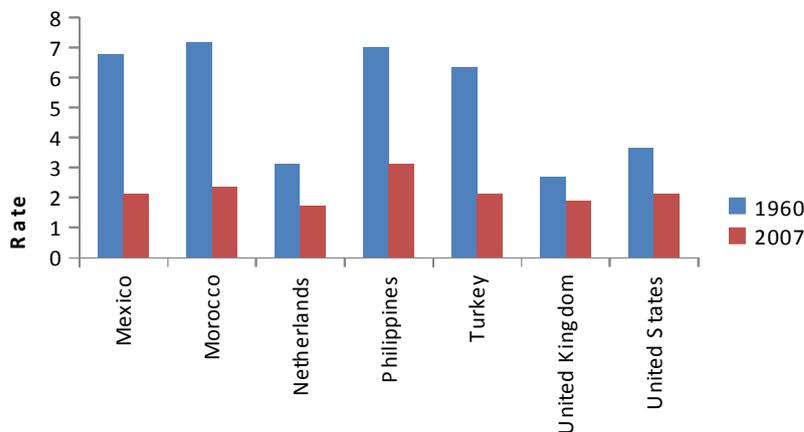
5.1 Demographic factors: fertility, longevity and gender

The dramatic demographic transformation in developed countries over the last few decades includes greater numbers of young people delaying their entrance into the labour market as they pursue higher education. This explains the greater availability of temporary jobs at the bottom of the hierarchy, which were traditionally occupied by teenagers. The role of women has also changed, with women's education rising steadily and their labour market emancipation progressing rapidly. These demographic changes motivate employers to hire foreign workers in order to cover resulting labour shortages in high- and low-skilled professions (Ruhs, 2010).

Nonetheless, as Figure 2 shows, this decrease in fertility rates is a universal phenomenon. Over the past decades, most middle- and low-income countries have witnessed dramatic decreases in birth rates. In the case of some important emigration countries, the decreases have been more dramatic, with countries such as Morocco, Mexico and the Philippines reporting a decrease in fertility rates of over 50 per cent over the last half-century. Moreover, as Fargues (2006) argues, this decrease in fertility may be endogenous to the migration process itself. That is, international migration may contribute significantly to reducing fertility rates. The mechanism at work suggests that migrants adopt new behaviour from the country of destination first for themselves, and later start transferring back 'social remittances' (Levitt, 1998) in the form of new ideas and behaviours to sending regions.

The crucial issue is that the worldwide decrease in fertility rates may end up significantly reducing global and national supplies of low- and high-skilled labour migrants. Hence, while the drastic fertility decline in advanced countries is increasing the demand for international migrants, the reduction in fertility in the developing world is potentially decreasing the supply of (high- and perhaps even low-skilled) migrants. This combination should imply, in the short run at least, increasing wages for these potential international migrants. The long-term effect of these two contradictory forces on the number of international migrants remains to be seen.

Figure 2: Fertility Rates in Selected Countries. Source: World Development Indicators United Nations, 2007)

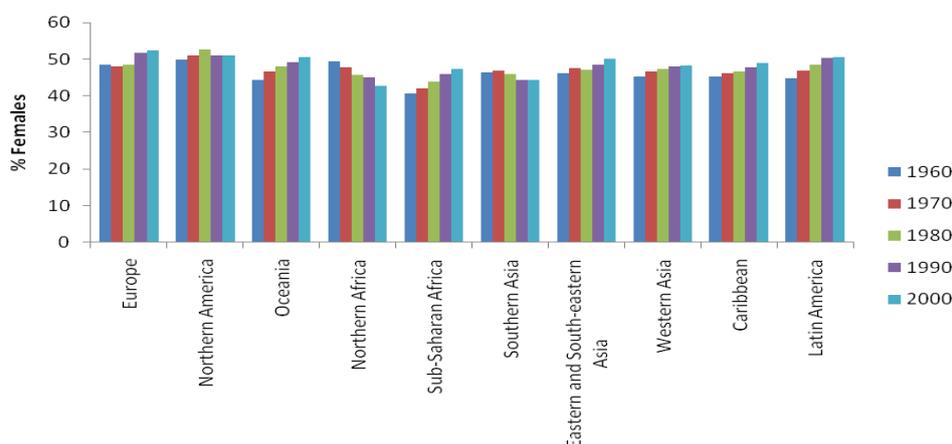


Finally, as suggested above, in addition to low fertility rates, developed countries are experiencing an increase in longevity and a reduction in the mortality rate, leading to rapid population ageing. This ageing process has, therefore, started a discussion of the concept of 'replacement migration', which is the level of international migration that a country would need to offset population decreases resulting from low fertility rates (UN, 2000). However, once migrants settle they will tend to adopt the fertility norms of the destination country and have fewer children and obviously get old; as a result, more immigrants may be needed to support them in old age (Geddes, 2002). More generally, such discussions assume the existence of a quasi-unlimited pool of cheap labour 'out there' (in the global South), which may be questionable in the long term in the light of global fertility decline and generic improvements in education.

Future global and regional shifts in longevity, fertility and gender balances will likely affect the global supply and demand for migrants. In many ways, this is already happening. For instance, in recent times public discourse on migration has emphasised the increasing feminisation of independent migration. Women currently account for almost half of migrants around the globe (IOM, 2010). But as Figure 3 clearly shows, this share has been large for many decades in all regions of the globe, which fundamentally challenges the feminisation hypothesis. Hence, this is not a new phenomenon. There is an increasing trend for most regions, but changes have not been dramatic. The key change is the way women are participating in the migration process. In the past, labour migration was male-dominated, and many women participated in the migration process through family reunion

(Castles, 2009). In recent decades, an increasing percentage of women have been migrating independently in order to look for better job opportunities, instead of simply joining their husbands abroad (United Nations-INSTRAW 2007).

Figure 3: Percentage of Female Migrants among the Total International Migrants' Stocks by Major Region of the World. Source: United Nations Population Division (2009).



There is a dual impact of the feminisation of migration. First, there is some evidence that women are less inclined to spend money on themselves in destination countries and therefore often remit a higher share of their salaries (VanWey, 2004). As a result, female remittance transfers tend to be on a par with male transfers even if their earnings are typically lower.⁶ Second, women are increasingly active in jobs that are less sensitive to business-cycle fluctuations, such as the health sector (Cangiano, 2009). For example, while the Government of Taiwan has drastically decreased the number of new and renewed permits of foreign manufacturing workers (a cut of over 40,000 permits) as a result of the latest economic turmoil, the number of permits for caregivers and maids, a sector traditionally dominated by females, has actually increased slightly (Fix, 2009).

This change in the role of women as migrants has, therefore, been accompanied by a strong demand for caregivers in the developed world as a consequence, among other things, of the ageing process of the population in many of these countries. While the feminisation of migration has increased, fertility rates have declined in most countries. In several developed countries (e.g. OECD countries) fertility rates have declined to levels below replacement (Sleebos, 2003). As Figure 2 shows, fertility rates have decreased by more than 20 per cent during the last half-century in countries such as the UK, the US and the Netherlands. These global demographic transformations and changes in gendered labour participation will have fundamental, but as yet largely under-explored, consequences of patterns and trends of international migration.

⁶ Nevertheless, there is also evidence questioning this assumption (Semyonov, 2005)

5.2 Economic context: labour market structure, relative wages, poverty traps

Labour markets are not homogeneous, but highly segmented. This can explain a sustained demand for migrant labour in particular segments of the economy, even under conditions of high formal unemployment and economic recession. Particular sectors such as agriculture, construction, cleaning, gardening and catering have increasingly attracted migrant labour. This exemplifies that the future structure of the labour markets as well as related factors such as economic growth, relative wage levels and outsourcing, will have a fundamental impact on future global migration patterns and trends, which seems in many cases much larger than the effect of official *migration policies* on migration flows.

The dual labour market theory splits the labour market into two components: a primary component that is capital intensive and a secondary component that is labour intensive. Workers in the primary component tend to earn higher salaries and enjoy better working conditions. A by-product of these two attributes is that these workers maintain a higher social status than workers in the secondary component of the labour market. Piore (1979) assumed that there will always be a shortage of labour in the secondary market in developed countries, that the shortage of labour can only be tackled with foreign labour, and that there is a constant, unlimited supply of foreign labour to fill these positions.

Positions at the bottom of the hierarchy are often associated with a low social status (these are part of the secondary market) and a low wage. As such, a viable solution can be to raise wages at this level, attracting more natives to fill these positions. However, in order to maintain the current social class structure these wages can only be increased if all the wages in society are increased, which is unrealistic and improbable (Massey, 1993). Even if all wages are raised there will always be a 'bottom' in the labour market, a position that confers a low social status (Massey, 1993). It then seems an obvious solution to bring foreign workers in who, at least in the short run, do not see themselves as part of the receiving society and are willing to accept jobs at the bottom of the destination country social structure, which still earn them a considerably higher income than the one they would have earned in origin countries. In addition to social status, there are reasons related to risk that may encourage native workers to avoid jobs at the bottom of the class structure. In fact, these jobs are usually unstable and sensitive to cyclical economic fluctuations, and most native workers are likely to prefer to avoid such positions. Once again, the frequent answer is to turn to migrant workers in order to fill these positions.

At the individual or micro level, characteristics of migrants are important determinants of migration. Migrants have very diverse backgrounds and while some are highly educated, others lack any formal education. This heterogeneity across individuals may imply different payments relative to the level of human capital of the individuals (Borjas, 1989). This heterogeneity may also imply dissimilar costs of migration, leading to different impacts on the net gain from migration for different people. However, the problematic implicit assumption of human capital theory is that migration is always a feasible option. This is not always the case. First, many receiving and sending countries have imposed migration restrictions (McKenzie, 2005). Second, poverty may constrain people from migrating. Such constraints may have grown due to the increasingly restrictive immigration policies, particularly for low-skilled, 'South–North' migrants.

Although such policies have not curbed migration as such, they have certainly increased selectivity and have excluded more poor people from South–North migration. In

other words, it does not matter if the expected real wage after adjusting for the cost of migrating is positive if you simply cannot afford to migrate. This is why neo-classical models of analysing migration have limited practical value, and can even lead to the wrong prediction. This also explains why real-world migration patterns are often counter-intuitive, and why migration and other policies often lead to unexpected migration outcomes. For instance, average wages in sub-Saharan Africa are much below those in developed countries, which would lead one to predict a massive migration flow from Africa to developed countries. In reality, African migration to Europe is comparatively small (Bakewell, 2007), because for many Africans poverty is a major constraint on their mobility which will offset any differences in prospective income. Differences in prospective income and the poverty trap interact in such a way that those that have more to gain from migrating are going to be unable to exploit such opportunity (Hatton, 2009). This has led to a global increase in involuntary immobility (Carling, 2002; Jónsson, 2008).

Conventional ideas that development will reduce migration are based on 'push-pull' and neoclassical theories, and assume an inversely proportional relationship between absolute levels and relative differences of wealth on the one hand and migration on the other. By contrast, 'transition theories' postulate that 1) development leads to generally *increased* levels of mobility; and that 2) societies tend to go through migration transitions characterised by an inverted U-shaped pattern of emigration. In a recent paper, de Haas (2010) provided an empirical test for this theory drawing on the World Bank / University of Sussex global migrant origin database. The results largely confirmed transition theory. Although several theoretical and empirical puzzles remain, the results suggest that take-off development in the least-developed countries, for instance in sub-Saharan Africa, is likely to lead to take-off emigration in the medium term. This may challenge some conventional thinking about South–North migration and shows the need to leave our 'comfort zone' of thinking about migration.

5.3 South–North flows and transnational networks

The total stock of international migrants has grown significantly over recent decades. It is estimated that there were 200 million international migrants by 2008 (IOM, 2010). However, the growth of the global migrant stock has generally kept equal pace with the growth of world population. This explains why the number of international migrants as a share of global population has remained fairly constant at levels between 2.5 and 3 per cent over the past century.

Although the relative volume of international migration has remained constant, the direction of dominant migration movements has radically changed. Following post-Second World War decolonisation and rapid economic growth in Western societies, there has been a reversal of global migration movements, with a decrease in North–South (colonisation) migration and a strong increase in South–North migration. This confronted many Western societies with the unprecedented settlement of non-Western, culturally and physically distinct, immigrants. This increasing visibility of global migration for the resident populations of Western, particularly European, societies helps to explain the Western perceptions that current migration is at unprecedented levels (de Haas, 2005).

In addition, recent technological advances have facilitated the communication of migrants with family members. First, the telephone replaced the international letter

communication system. Then email and other internet-based communication partly displaced the relatively costly international calling system. Nowadays the internet provides better and faster communication between migrants and households in origin countries. These advances in technology have facilitated the transfer of information across countries and, in conjunction with a reduction of fees for transferring money across countries, have spurred an increase in the international flow of migrants' transfers. The latest estimates from the World Bank value global remittance flows to be around US\$338 billion (WB, 2008).

5.4 Institutional and political environment

Often migration policies respond directly to (perceived) public opinion (Facchini, 2008). This explains why migration policies often lack coherence. Migrants are an easy target for politicians because many migrants do not have the right to vote. In fact, countries are currently much more disposed to open up their borders to trade in goods and capital inflows than to immigrants, and there is evidence that this difference may originate from differences in public opinion towards these policies (Mayda, 2008). At the same time, politicians' attitudes towards migration and migrants influence public opinion (Kehrborg, 2007) and, hence, causality is likely to run both ways.

It is also important to consider migrants' access to public services such as health, education and public housing. In many countries, migrants are allowed to use these services, while in others access to public services is limited. The potential use of public services by migrants is a controversial topic. Denying access to these services can create a category of 'second-class' residents, while allowing access to these services can potentially impose a fiscal burden on the receiving country. Accordingly a prime area of exploration for scenarios is looking at the consequences of the denial of services and the treatment of migrants as second-class residents.

5.5 Effects of climate change and environmental degradation

Long-term global processes such as global warming and localised forms of environmental degradation (for instance, land degradation in semi-arid environments) are likely to affect global migration patterns, although the volume and directions of such effects are highly contested. Some analysts believe that such crises may cause large-scale forced migration, creating international tensions and threatening social cohesion. But the evidence so far is largely based on deductive methods, and there is very little empirical evidence on the coping strategies adopted by local communities as their environments change. Available empirical evidence seems to defy such apocalyptic scenarios and suggests that migration may only be one of a range of possible responses to climate change (Castles, 2002; Jonsson, 2010). Hence, it is difficult to argue that environmental degradation by itself is a powerful determinant of migration, given that environmental change interacts with socio-economic factors in order to determine the feasibility and attractiveness of migration.

Among the questions that remain to be answered are: How 'voluntary' is migration when environmental factors are involved? Is migration part of the adaptation process or is this failed adaptation? Are these migrants likely to be temporary or permanent? Finally, as the Environmental Change and Forced Migration Scenarios Project of the European Commission argues, it is important to establish whether migration would have occurred anyway in the absence of environmental degradation.

6 Conclusion

The purpose of this paper was to review the literature on scenarios and relate it to the pre-existing discussions on migration drivers and migration futures. In reviewing the main insights from both strands, we proposed a scientific concept of scenario as a combination of stories that describe different futures using methods that systematically gather perceptions and data about certainties and uncertainties. This is based on the appreciation that *both* linear and non-linear approaches to migration futures have to account for the highly uncertain environment we live in. Hence, in giving centre stage to uncertainties with regard to international migration and in unearthing underlying assumptions, the concept allows us to reframe the relation between researchers and 'practitioners' in such a way as to stimulate confrontations and discussion between various perspectives in order to maximise creativity and to foster outside-the box thinking in developing ideas about the future evolution of migration. While scenario methodology has already been applied extensively to the business and military sectors, it has been scantily applied in the field of migration. More attention needs to be paid to the complex relationship between macro-contextual change on the one hand, and the nature, direction and volume of migration on the other. In taking a first step towards this broad objective, this paper also sought to make explicit how less and more certain trends in macro-level drivers may affect migration in rather unexpected and counter-intuitive ways. The theoretical overview of migration scenarios presented herein intends to set the groundwork for applied research on migration futures and encourage conceptually and methodologically bold approaches to the study of long-term drivers of migration.

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