Chapter 1 : Determinants of recent fertility decline in Sri Lanka (English) | The World Bank

determinants of fertility decline in particular. The Demographic Transition Theory (DTT), with a basic comparison of birth and death rates across developed countries.

Fundamentally, fertility was high, typically around five to seven births per woman, because of high death rates. Without high fertility, most societies would have experienced population decline and eventual disappearance. The necessity of high fertility for the survival of the community does not imply that most persons had a conscious awareness of the relationship. Rather, the desire for high levels of childbearing was woven into the cultural fabric and the social institutions of traditional societies. In addition to strong cultural inducements for marriage and childbearing, the well-being of the family in traditional societies was dependent on having several children who survived to adulthood. Families were the primary economic units as well as reproductive unions. Children were a valued source of household labor and were also the preferred means to guarantee the old-age security of parents. In societies without formal schools, mass media, and modern transportation, family relationships and interactions were the center of social and cultural life. Larger extended families provided more companionship, a wider circle of trust, more protection in times of trouble, and a higher status for patriarchs and matriarchs than did smaller families. The population problem in traditional societies was maintaining some sort of rough balance between births and deaths. If population decline could threaten community survival, a long period of increasing population numbers would likely outpace the expansion of food and other resources. Although population growth averaged close to zero over long stretches of human history, there were periods during which population size increased across generations. In many cases, out-migration to frontier regions reduced population pressure, but all too frequently it was crisis mortality that brought population numbers back in line with subsistence levels. These episodes of famine, plague, and war were labeled by the English economist T. Malthus â€” as positive checks, which he thought were inevitable, given the tendency for populations to grow faster than the means of subsistence. The only way to avoid these dismal cycles of demographic growth and implosion, Malthus argued, was through preventive checks, of which the only acceptable variants were moral restraint that encouraged celibacy and the postponement of marriage. Malthus was pessimistic, however, that moral restraint would be sufficient to avert positive checks because of the underlying "passion between the sexes. His pessimistic scenario of expansion and decline did characterize the population dynamics of many premodern societies, although periods of growth could be accommodated for decades or even centuries, depending on the technology of production, the possibilities for long-distance trade, and the size of the frontier. Moreover, plagues, famines, and wars often followed their own dynamics, independent of population size and growth. In all societies, fertility or infant survival is held in check in varying combinations by delayed age at marriage, by some proportion of the population never marrying, by long periods of breast-feeding which suppresses ovulation , and by cultural proscriptions that affect the frequency and timing of sexual intercourse. Folk methods of birth control together with abortion and infanticide would often have also played a role. Such practices, especially delayed age at marriage, reduced fertility in many traditional western European societies by the eighteenth and nineteenth centuries to levels of only four to five births per womanâ€”in circumstances in which the probability of survival to adulthood may have averaged only around 50 percent. The variations in "high fertility" across societies and over time suggest that fertility was regulated in response to socioeconomic conditions and ecological constraints, although most couples may not have been consciously controlling family size. Demographers label a fertility rate of about two births per woman as replacement-level fertility because two children, in the contemporary context of low mortality, are sufficient to replace their parents in the next generation. The transition from high to low fertility was not only an unprecedented demographic revolution but also a cultural revolution with profound implications for the definition of the family and the adult roles of women and men. Modern societies are still in the process of adapting old and creating new institutions and gender roles in the wake of the relatively recent transition to low fertility. About a hundred years after the beginnings of fertility declines in western Europeâ€”declines that with varying delays soon also spread to the

rest of that continentâ€”a similar process began in the developing countries of Asia, Latin America , and Africa. This second wave of fertility transitions began soon after the end of World War II in Japan and in the late s and early s in a few other East Asian countries and small island societies. By the s, fertility declines had begun in almost every part of the globe, including areas of persistently high fertility in South Asia and sub-Saharan Africa. Although most of these fertility transitions were still in process and some had far to go by the early twenty-first century, a generalized low-fertility world was in sight. Replacement-level fertility was achieved in some East and Southeast Asian countries in the s and s, and the United Nations assumed in its medium variant projection series that almost all developing countries would have below-replacement-level fertility or below replacement fertility by the middle of the twenty-first century. Demographic Transition Theory The theoretical task of explaining modern fertility transitions as a consequence or a delayed consequence of declines in mortality and of the socioeconomic changes that have transformed rural agrarian societies into modern industrial societies has been the central question of the scientific field of demography. Although some of the basic ideas can be traced back to the first half of the twentieth century and the works of Warren Thompson â€” , Adolphe Landry â€” , and Kingsley Davis â€” , Frank W. Notestein â€” wrote the classic statement of demographic transition theory in The central thesis of the theory was generally presented as a three-stage model: Although sometimes framed as more of a descriptive account of what has happened, demographic transition theory, as presented by Notestein, was a sophisticated interpretation of how fertility declined in response to declining mortality, the reduced role of the family in economic organization, the growing independence of women from traditional roles, and the shift from customary behavior to calculative rationality spurred by popular education. Until the s, the theory of the demographic transition was almost universally accepted by demographers and was widely disseminated in introductory textbooks through stylized graphs and an interpretation of declining fertility in response to the modern forces of industrialization, urbanization, and literacy. These processes had occurred in many Western countries during the nineteenth and twentieth centuries and were presumed to be on the near-term horizon of many developing countries. Relative to other theories in the social sciences, demographic transition theory represented one of the most ambitious and convincing interpretations of the momentous social changes of modern times. The general formulation of demographic transition theory, sometimes summarized as a list of independent variables associated with urbanization, industrialization, and modernity, was often an inadequate guide to cumulative empirical research. Because the many indicators representing the key causal forces were considered interchangeable and because the unit of analysis was at best vaguely defined , many of the specific hypotheses of the theory, such as the changing cost of children in rural and urban environments, were rarely differentiated from the broader story about industrialization and urbanization. The net result was that in spite of a proliferation of empirical studies, often with contradictory results, relatively few refinements were made to demographic transition theory. There were, however, two major essays, published by Davis in and by Ansley Coale â€” in , that marked major advances from the standard formulation of demographic transition theory. Although declines in mortality and progress toward modernization typically reduce marital fertility through increasing use of contraception and higher rates of abortion , Davis noted that postponement of marriage, increasing rates of celibacy, and out-migration were also part of the demographic repertoire of adaptation to population pressure. Davis suggested that the timing of the onset and the pace of fertility declines vary across societies and regions in a society depending on the relative weights of these responses. Based on his observations of the varied patterns of fertility decline in late-nineteenth-and early-twentieth-century Europe, Coale suggested that fertility declines were affected not only by socioeconomic change but also by the cultural context of the society. In an influential formulation he specified three preconditions for fertility decline summarized by others as "ready, willing, and able": Demographic transition theory had primarily focused on the second pre-condition, namely that there must be a perceived socioeconomic gain to motivate couples women to want fewer children. Presumably, changes in reproductive motivations would follow from industrialization, urbanization, and other changes in social institutions that lower the economic advantages or increase the costs of children. The first and third preconditions noted by Coale point to factors that had been largely taken for granted by demographersâ€”factors that are irrelevant if the second condition is not satisfied and readily

forthcoming if it is. By fertility being within the calculus of conscious choice, Coale meant there must be social legitimation for the idea of fertility regulation before most couples will act in ways that challenge traditional values of having a large family. This assumption is supported by the finding of Ron Lesthaeghe and Chris Wilson that secularization measured by voting for nonreligious political parties was a very important determinant of the timing of fertility decline, net of economic factors, across provinces in Europe. In deeply traditional societies with few external influences beyond the family and religious authorities, couples may not think there are any choices to be made. The third precondition is that couples know how to regulate fertility. The presence of knowledge of fertility limitation in a society does not mean that all or even most couples actually knew how to practice fertility control. Alternative Theories of Fertility Decline In the s and s, two streams of demographic research directly challenged the hegemony of demographic transition theory. Although the European Fertility Project was envisaged as an empirical test of transition theory on its original home ground, the results showed that the pace of fertility decline across provinces and regions of Europe was only modestly correlated with the socioeconomic variables that figured so prominently in the standard theory. Instead, the patterns and pace of fertility decline appeared to be more associated with regions that shared common languages and culture than with regions sharing common socioeconomic features. The second challenge to demographic transition theory came from the results of comparative analyses of data from the World Fertility Survey WFS project. The WFS project consisted of cross-sectional studies of individual-level correlates of fertility behaviors, attitudes, and contraceptive practice in dozens of developing countries around the globe. Although these studies showed that, in general, fertility was correlated in the expected direction with female education, urban residence, and other socioeconomic variables, the relationships were often modest and many exceptions could be found. Following on these findings and the research of Lesthaeghe, John Cleland and Chris Wilson wrote a bold essay, published in , that questioned the empirical validity of demographic transition theory and suggested that an alternative model of culture and fertility, labeled ideational theory, would be a more appropriate theoretical framework. Ideational theory holds that cultural values are the primary influence on fertility. In some cases, cultural values supporting high fertility may be only slowly and partially eroded by socioeconomic changes. In other situations, cultural values that shape fertility behavior can change rapidly with the diffusion of ideas independently of socioeconomic change. There has also been a proliferation of other new theories and accounts of modern fertility transitions. One of these is John C. Caldwell posits that mass education and Westernization values communicated through the mass media and cinema have popularized the idea of "child-centered" families that reduce the flow of wealth, services, and other valued resources up the generational ladder. Because these changes have made children less valuable, there are fewer incentives to have large families. Another, very influential, theoretical direction was suggested by the application of microeconomic theory to household decision-making regarding choices to have children. And Richard Easterlin has attempted to integrate the economic and sociological approaches to fertility change in a model that takes account of the demand for children, the "supply" of children, and the cost of fertility regulation. Although there are many insightful ideas and considerable intellectual excitement in the new theoretical literature on fertility transitions, it is sometimes hard to tell what is fundamentally new and what is merely the repackaging of earlier ideas. Karen Oppenheim Mason cogently argued in that much of the debate on the causes of fertility transitions is in fact concerned with variations in the proximate conditions that influence the timing of fertility declines, and that there is broad agreement over the long-term historical factors, especially mortality decline, that have led to fertility transitions. The portrayal of demographic transition theory as a universal model of modernization and fertility decline is probably too general and vague, but there is a considerable body of evidence that socioeconomic development has been more influential in shaping historical and contemporary fertility declines than many critics have acknowledged. There are, of course, considerable variations in the timing of the onset and the pace of fertility declines across populations, and across groups and regions within populations, and these variations are often associated with cultural and linguistic factors. The influences of socioeconomic and ideational factors need not, however, be considered as opposing hypotheses, but rather as complementary elements of an integrated theory of fertility change. Fertility, and population growth more generally, clearly respond to societal pressures that threaten the survival

and well-being of human communities. Although there is much evidence that socioeconomic development is associated with fertility change in many but perhaps not all societies, there is ample room to consider additional hypotheses for other social and cultural factors that influence demographic change in varied circumstances. Observing the rapid spread of fertility transition to almost every region and country, at highly varied levels of socioeconomic development, Cleland concluded in that declines in mortality are the most likely common cause. The impact of public intervention, particularly family planning programs, on fertility trends continues to be debated. The conventional wisdom, initially proposed in the classic study by Ronald Freedman and Bernard Berelson, is that the combination of vigorous family planning efforts and a favorable socioeconomic setting produce conditions most likely to lead to lowered fertility. Nevertheless, the task of sorting out the independent and joint effects of setting and policy has been remarkably elusive. The initiation of family planning programs tends to be an inherent part of the process of development itself, and it is difficult to obtain independent empirical assessments of each. Successful governments tend to have effective public programs, including well-managed family planning programs. Within countries, family planning clinics are not distributed randomly but are typically placed in areas of high fertility. Thus, the bivariate two-variable association between proximity to family planning services and level of fertility is usually positive. The results of more complex multivariable models are heavily dependent on initial assumptions and the analytical formulations: Several studies show only modest effects of family planning programs; others have reported more positive assessments. The end of fertility transition was never defined beyond the general expectation that low fertility would approach the replacement level around two children per couple within some modest range of fluctuation. This has generally been the case in the United States: The total fertility rate births per woman dropped slightly below two births per woman in the mids, and then rose slightly to around two in the s. In Europe, however, fertility continued its downward descent and by the late s was well below the replacement level and showing no sign of rising. In some eastern and southern European countries in the early twenty-first century, average fertility, as measured by the period total fertility rate the number of children a woman would eventually bear if current fertility rates persisted appeared to be approaching one child per couple. One school of thought holds that this is a temporary phenomenon, driven primarily by poor economic conditions and a temporary rise in the average age of childbearing. If fertility is merely being postponed and most couples will eventually have two births, then in the early twenty-first century period measures of fertility are not an accurate prediction of the future. Indeed, survey data on fertility expectations show that most women in industrial societies still want to have two children. But other observers believe that the costs of childbearing socially and economically are so high in modern industrial societies that below-replacement fertility is likely to continue indefinitely, with the prospect of declining population size. Conclusions The first fertility transitions began in the nineteenth century, and average fertility levels reached about two births per woman in a few western European countries in the early decades of the twentieth century. At the dawn of the twenty-first century, the dominant trend is of a global fertility transition throughout the developing world and a sudden drop to below-replacement-level fertility in many European countries.

Chapter 2 : Determinants of fertility decline in India (English) | The World Bank

determinants of fertility decline in the case of Namibia. Country background Namibia has a population of about million and it is one of sparsely populated country in the world.

Although some have already reached the replacement level of 2. After remaining at approximately 7. However, the decline slowed between and to an average of 0. The decline in child mortalityâ€"one of the prerequisites for a sustained demographic transition 2 â€"similarly slowed: Mortality fell from 82 deaths per 1, children younger than five in to 39 deaths in , and then to 35 deaths by In a recent study, a leveling off in contraceptive use was accompanied by stalled fertility in several less-developed countries. This comment considers proximate determinants of fertility union status, contraceptive use and postpartum infecundability for the â€" period, and examines whether the patterns of these determinants and of fertility desire are consistent with the stalled fertility decline in Ecuador. This comment uses data from the Ecuador Demographic, Maternal and Infant Health Surveys conducted in , and by the Center for Studies of Population and Social Development, with technical assistance from the U. Centers for Disease Control and Prevention. These samples are representative of populations in 17 geographic units in Ecuadorâ€"10 provinces in the Sierra region, five in the Costa region, and the entire Insular Galapagos Islands and Amazonia regions. The Costa, which borders the Pacific Ocean, includes the main commercial port city, Guayaquil. The Insular and Amazonia regions were not included in the survey, so the national estimates for are not entirely comparable with those for and However, because the sensitivity analysis suggests that estimates with these two regions do not differ substantially from those without them, estimates for all regions are presented. The consistency and quality of fertility measurements in these three surveys are assessed by comparing cohort-specific fertility rates for each survey period on the basis of retrospective five-year birth histories; estimates are available for the Sierra and Costa regions separately, and for the country as a whole. The results indicate a high degree of similarity among these estimates. Hence, it appears that fertility decline has stabilized in Ecuador over the last decade. In the second half of the 20th century, the decline in fertility in the Costa region was more rapid than that in the Sierra region. Furthermore, much of the decline in the Sierra came from the rural areas, where the TFR dropped from 4. As a result, the fertility rates in the Costa and Sierra regions were significantly different in , but not in Women with more education showed virtually no decline at any level of schooling over that period: The fertility level stabilized at 4. Thus, the fertility gap between women with the lowest and the highest levels of educational attainment narrowed in the survey. Proximate Determinants of Fertility We used the Bongaarts model 10â€"12 to assess whether levels of the proximate determinants of fertility changed over the three survey periods, and whether any such changes might explain the stabilization of fertility in Ecuador. In the Bongaarts model, the relative importance of the proximate determinants of fertility after conversion to indices can vary from 0 to 1, where 1 indicates no inhibition of fertility by the determinant and values closer to 0 indicate increasing inhibition Table 3. The product of these indices and the hypothetical maximum potential fertilityâ€"estimated to be The large increase in the proportion of women who used contraceptives translates into the large decrease in the value for contraception, which fell from 0. The importance of this decrease is illustrated by the decline in the predicted TFR, from 2. However, the growing gap between the predicted and the observed TFRsâ€"from â€"0. The lack of association between contraceptive prevalence rate CPR and region or education level is evident in the Costa region: Virtually no change in fertility was observed between and , but the CPR increased at a similar rate in the Costa and Sierra regions Table 4. In the Sierra region, however, where the fertility level dropped significantly over the decade, a negative association between CPR and TFR was seen, as expected. In particular, the fertility-reducing effect of rising contraceptive use in rural areas of the Sierra is clearly evident. Contraceptive use also increased over the decade for women at all educational levels. However, for women with six or more years of schoolingâ€"whose TFR was already lower than those for women with less schoolingâ€"fertility was not responsive to the increases in contraceptive prevalence between the surveys. Fertility Preferences At each survey, respondents were asked to classify all births in the survey period as wanted, mistimed or unwanted. In the other age-groups, the proportions of

wanted and unwanted births did not change substantially. In addition, the mean of the ideal number of children desired by Ecuadorean women remained level: The striking absence of change in this preference is consistent with the lack of decline in fertility over the decade, and may explain why TFRs did not decrease with increased contraceptive use: Women were reaching their desired fertility level, and hence their contraceptive use was directed at spacing their births, not at reducing the total number of children. Furthermore, the gap between the observed TFR and the mean ideal number of children across subregions may have been too small to produce a substantial decrease between and Conclusions The decline in fertility has leveled off in Ecuador at about three lifetime births per woman. This stabilization was particularly evident in the Costa region, where the fertility rate was already low in ; regional differences in fertility levels that existed in the last half of the 20th century have now been largely erased. Women with at least six years of schooling did not experience a significant decline in fertility, and rates have stabilized among women at all education levels except 0â€”5 years of schooling. The smaller but still significant differences in TFR by education level suggest that an increase in educational attainment among Ecuadoreans may facilitate a future decline in fertility, 13 but the process will be slow. However, instead of continuing its decline, total fertility stabilized, particularly among women living in the Costa region and among those with at least six years of schooling. Finally, the lack of change in the level of unwanted births and the desired number of children across the same period is consistent with the stalled decline in fertility, and the increased use of contraceptives likely indicates that women are focusing on the timing of their births, albeit with limited success. The absence of a strong association between fertility rates and contraceptive use, and the small gap between the observed TFR and the mean ideal number of children reported in , suggest that prospects for further fertility decline in Ecuador are limited in the near future. Coale AJ, Population growth and economic development: Informe Final, Quito, Ecuador: Bratt JH et al. Bongaarts J, A framework for analyzing the proximate determinants of fertility, Population and Development Review, , 4 1: Bongaarts J, Completing the fertility transition in the developing world:

Chapter 3 : Determinants of Fertility Decline in Botswana | Gaisie | African Population Studies

Examination of the changes in the proximate determinants of fertility in Kenya from the late s to the late s reveals the primary importance of increasing contraceptive use in the fertility decline over this same period.

Received Apr 2; Accepted Nov This article has been cited by other articles in PMC. Abstract Objectives We examined the overall contributions of the poor and non-poor in fertility decline across the Asian countries. Further, we analyzed the direct and indirect factors that determine the reproductive behaviour of two distinct population sub-groups. Design Data from several new rounds of DHS surveys are available over the past few years. The DHS provides cross-nationally comparable and useful data on fertility, family planning, maternal and child health along with the other information. Six selected Asian countries namely: Bangladesh, India, Indonesia, Nepal, Philippines, and Vietnam are considered for the purpose of the study. Three rounds of DHS surveys for each country except Vietnam are considered in the present study. Computed household wealth index has been broken into three equal parts The Bongaarts model was employed to quantify the contribution of each of the proximate determinants of fertility among poor and non-poor women. Results Fertility reduction across all population subgroups is now an established fact despite the diversity in the level of socio-economic development in Asian countries. It is clear from the analysis that fertility has declined irrespective of economic status at varying degrees within and across the countries which can be attributed to the increasing level of contraceptive use especially among poor women. Over the period of time changing marriage pattern and induced abortion are playing an important role in reducing fertility among poor women. Conclusions Fertility decline among majority of the poor women across the Asian countries is accompanied by high prevalence of contraceptive use followed by changing marriage pattern and induced abortion. Introduction Fertility decline is strongly associated with socio-economic development since changed or improved socio-economic conditions motivate individuals, couples and families to reduce fertility [1 , 2 , 3 , 4 , 5]. During the s much of the world experienced substantial economic growth. Contrary to common wisdom, the worldwide fertility decline which occurred over the past forty years in developing countries was anticipated by demographers and population forecasters. What was not really anticipated was its magnitude. Since the transition from high to low fertility is now virtually universal, it is clear that its onset does not depend on the level of development and that the path it will follow is not necessarily determined by socio-economic factors such as levels of education, female employment, or urbanization [6 , 1 , 7]. Therefore, proximate determinants of fertility are more relevant in explaining changing fertility behavior since they represent the mechanisms through which the reduction of fertility has occurred. Therefore, it is imperative to study the proximate determinants of fertility to assess the likelihood of fertility reduction in countries with intermediate fertility levels at present that will reach replacement level in near future. In addition, changes and contribution of proximate determinants reveal the turn down factor of fertility precisely. A number of experiences confirm that the initial fertility reduction was instigated by educated and socio-economically affluent group of women [8 , 3 , 9 , 10]. However in past three to four decades prominent changes in reproductive behaviour have been documented. Literature confirmed that the bulk of fertility decline is now occurring in most of the regions of the developing world among women without education and this transition is being driven in a major way by the increasing contraceptive prevalence rates among illiterate or less educated women [11 , 12 , 13]. The substantial decline that took place in few poor and largely agricultural countries such as Bangladesh was completely unexpected and is forcing a major revision of theories about fertility decline [6]. Since the fertility level was being controlled by the higher socio-economic group initially, the later decline in its level may be the response of the fertility control among the destitute group in the society. As poor women join in the above transition process which has not yet happened in many societies that are in mid-transition , poverty and inequality reduction affects increases [14]. During the two decades, Asian fertility declined dramatically [15]. Almost all the Asian countries have experienced fertility decline in last two decades though, at various levels. The onset of the fertility transition from high to low fertility rates was clearly a widespread phenomenon in Asia during that period. In particular, majority of the fertility decline in Asia have occurred among poor, with large rural and

illiterate strata [1] in most populous countries like Bangladesh, India, China, Indonesia, Sri Lanka and Vietnam. Interestingly, demographers and policy makers did not expect such rapid fertility decline among rural, poor and illiterate section of the society [16]. Therefore, it is imperative to explore the fertility behavior and the direct and indirect factors shaping the child bearing process among economically indigent section of the society. In addition, their contribution in the recent ongoing fertility transition which will highlight their needs and preparedness for a sustainable contribution in fertility reduction. Review of Literature The recent decline in fertility in developing countries created interest among researchers, policy makers and academicians. This is because such a dramatic change in fertility has occurred without a substantial improvement in socio-economic status, health conditions and outlier factors thought to be needed to bring about a fertility decline. Some argue that the decline in the fertility level was achieved mainly because of a successful family planning programme [17]. Population development programmes have, no doubt, contributed to the fertility decline. However, several biological, behavioural and cultural factors are also involved. Bongaarts termed these factors as proximate determinants of fertility, since they directly, affect fertility; all other social, economic and environmental factors affect fertility through these variables [18]. Age at Marriage Marriage, the legal and cultural institution that sanctions childbearing, is one of the most important determinants of fertility. Age at first marriage has a major effect on childbearing because women who marry early have, on average, a longer period of exposure to the risk of becoming pregnant and a greater number of lifetime births. It is widely acknowledged that age at marriage has a significant influence on fertility, particularly in countries where childbearing occurs within marriage. Therefore, in societies where child bearing prior to marriage is not socially acceptable, postponement of marriage contributes significantly towards a reduction in the level of fertility by shortening the total reproductive span of women. This in turn reduces the number of children a woman is likely to have and has a negative impact on the population growth rate of a country. Age pattern of marriage was discovered as an important factor for reducing marital fertility rate due to late marriage and a higher proportion of celibacy in developed countries [19 , 20 , 21 , 22 , 9]. Western Europe responded to the Malthusian challenge of over population in the nineteenth century with an increase in the marriage age, which significantly cut fertility. In the developing countries, some drop in fertility is occurring because of a rise in the marriage age due to increasing education and employment, and a legal attempt through legislation to prohibit early marriages [23]. In few developing countries in Asia and Africa, where the use of effective contraceptive methods are low, delayed marriage has played an important role to engrave the fertility level [24]. A review of the recent literature provided evidence that, despite the changing pattern towards later marriage, Asian countries display considerable variations in marriage patterns. Interestingly, one pattern is shared in all Asian countries: Social and economic forces are transforming traditional marriage pattern in Asia. In the near future marriage behavior in Asia will reflect the paths of key modernization process: It is quite likely that each of these processes will encourage continued marriage delay and perhaps even the greater prevalence of celibacy in the coming decades [23]. An increasing trend in age at first marriage was found in Vietnam [26]. The increase was modest but significant over time after controlling for other socioeconomic variables. Education, type of residence, wealth, age, region, and ethnicity were strongly related to age at first marriage. Study also revealed that there were significant proportion of women who got married during adolescent especially among rural; minority; and less educated women. Another study [27] found that education and age at first marriage are strongly associated both at the individual level and at the societal level: Marriage change has played a considerable role in the recent fertility declines in a number of Asian countries [28]. Both delay in marriage and postponement of childbearing by married couples held down fertility. Possibly rising individualism also plays a part. Unlike in Western countries where marriage is not a pre-condition for child bearing, in most Asian countries child bearing prior to marriage is not socially acceptable and is therefore extremely uncommon. Postponement of marriage therefore contributes significantly towards a reduction in the level of fertility by shortening the total reproductive span of women, which in turn reduces the number of children a woman is likely to have and hence reduces the population growth rate of a country. The age at marriage indeed has a significant effect on the fertility of womenâ€”an increase in the age at marriage significantly reduces total fertility of women. Further, the higher the education

level of the woman the stronger is the effect of education on the age at marriage and total fertility. The examination of the estimated age at completion of childbearing and the average length of the childbearing span by age at marriage showed that women who married younger had a longer childbearing span, which allowed them to produce more children, than their counterparts who married older. This increase of fertility with increased exposure time is consistent with natural fertility [30]. Contraception Large fertility decline in the developing world occurred due to a major change in reproductive behaviour of couples in the childbearing ages [31]. More specifically, contraceptive practice has been considered as the interventions of choice for slowing population growth. In less developed countries there was a wide gap in contraceptive prevalence rate between the highest and lowest wealth quintiles [33]. This gap between the rich and poor in the use of contraception has persisted despite general global improvements in socio-economic status and the expansion of family planning services [34]. Health disparities between the rich and poor remain a persistent challenge [35 , 36]. The primary reason for the growth in contraceptive prevalence from the s to the late s and s in Latin America, Asia and Africa was that couples who in the earlier period wished to avoid pregnancy but were not using contraceptives were far more likely to be doing so in the more recent period, presumably because of the weakening of obstacles to use that previously prevented them from implementing their fertility preferences [37]. It was argued that significant decrease in fertility was due to social and economic development, and had nothing to do with promotion of family planning. Moreover, the universal provision of effective and low-cost contraceptives to eligible couples helped the contraceptive practice rate to rise very quickly. These actions enabled couples to control their fertility to the declining level of ideal number of children [38]. Another study in Uganda by Bbaale and Mpuga found that education, particularly of women, was an important factor in reducing fertility. There was near universal knowledge of methods of family planning, but very few women used these methods and even fewer the modern methods. Further, access to or use of contraceptives was positively associated with the education of both the woman and her partner [39]. Contraceptive knowledge significantly reduces fertility. Besides, mass media exposure and social networks play important roles in obtaining knowledge of modern contraceptive techniques. Women, who regularly watch TV, listen to the radio, or read newspapers and magazines are more likely to be exposed to contraceptive-related information and hence have more knowledge of contraceptives. Ross and Stover concluded that countries with high social and economic development had high contraceptive prevalence [41]. Studies have also shown that countries in which all couples have easy access to a wide range of contraceptive methods have a more balanced methods mix and higher levels of overall contraceptive prevalence than countries with limited access to various contraceptives [42 , 43]. Another study [44] found that the easier the accessibility of contraceptive services to women in a community, the higher the rate of contraceptive use. Total fertility in Vietnam had fallen dramatically due to high rates of contraceptive use and of induced abortion [45]. This analysis indicated that illiterate women and their children are the greatest recipients of the benefits of health and socio-economic advancement. The standardised percentages of women without education who received three antenatal care check-ups and whose children received full immunisation are sharply higher for women with two children and less than for those with more than two children. Child mortality reductions for women of lower parities are steeply higher for uneducated women compared with educated women. These cumulative benefits of low fertility, in effect, have speeded up the health improvement and socio-economic advancement of the states [13]. Another study in Indian context found that women who have received family planning messages from health care workers are more likely to use contraceptives as compared to other women. Most of the increase in propensity has been explained by the increase in use rate among women of urban areas and rural women who had access to health facilities. Education continues to have a significant positive influence on contraceptive use however; the differential by educational groups has become much smaller. This change reflects an increase in use rate among women with no education. Therefore, the change in the fertility level of uneducated women is the major factor, which, contributed to a decline in the overall fertility level [46]. Choice of contraceptive depends a lot on the socio-economic and cultural set up of the country.

Chapter 4 : 5 Proximate Determinants of Fertility | Population Dynamics of Kenya | The National Academie

Abortion had a limited fertility inhibiting effect compared to other two proximate determinants and it was the third important proximate determinant for explaining the fertility decline. Analysis showed practice of induced abortion varied across the countries by economic status.

Abstract Background The most important elements to determine the rate of population growth is fertility. Fertility is the main element to affect the welfare of mother. The survival of a child can be affected by high fertility and shorter birth intervals. Methods For this study, the linear mixed model was used to determine factors affecting fertility status of women in Ethiopia. The Ethiopian demographic and health survey data was used for this study. Results From the result, materials used for roof, wall and floor were found to have a significant relation to fertility level of women in the last five years. Moreover, family size and births in the last five years were found to have a significant relationship. Conclusion Significant variation in fertility level was observed among rural and urban residents of Ethiopia. To reduce the gap of fertility between rural and urban population, it is important to modernize different factors. These factors could be access to education, media, and providing employment opportunities in the modern economic sector. Besides this, it is important to develop and maintain the access of family planning services. It contributes for the change and structure of the population In sub-Saharan countries, fertility rate is high compared to the rest of the world 1 â€” 3. In Ethiopia the situation is similar, i. According to the Ethiopian demographic and health survey, the total fertility rate at national level was 4. This value indicates that much effort should be made to attain the targets set in the national population policy of Ethiopia by For high fertility rate, the main reasons might be early age at first marriage, desire for more children and extremely low contraceptive use. There are some of the major reasons behind such high fertility rate 6 , 7. Because agriculture is the major economic sector in Ethiopia, most families want to have large number of children. This is because, they are considered as an economic asset rather than liabilities. For most of rural areas, the children assist their parents in farming activities, i. Similar to many countries in sub-Saharan Africa, having many children is considered as an advantage and gift of God in a number of Ethiopian rural communities 8 , 9. Through years, the Ethiopian government developed several strategies to reduce fertility levels since The plan of the government is to reduce total fertility rate from the then 7. Therefore, it is important to identify socio-economic, demographic and geographic factors which could contribute for the level of fertility in Ethiopia Materials and methods Data Source The Ethiopian demographic and health survey DHS is conducted within five years of period , and This survey is administered at the household level. For this study, the Ethiopian demographic and health survey was used. The survey consist selected enumeration areas. Complete household listing was carried out in each of the EAs. For the survey, sample of 17, households was selected. To estimate at the national level, all data of the survey were weighted. Therefore, interviews were conducted with 9, 15â€”49 aged women and 6, 15â€”59 aged men. Therefore, the EDHS sample was designed to provide estimates for the health and demographic variables of interest for Ethiopia as a whole; urban and rural area of Ethiopia and 11 geographical areas 4 , 5 , Variable of interest Response variables: This information is obtained by asking the mother how many live births she had in the past five years. The socio-economic variables were the following: Statistical methods For this study, the linear mixed model was used. This method first developed for applications in animal genetics and breading research 12 â€” The linear mixed model consists of fixed and random effects. A fixed effect refers to the levels of the factors used in the experiment. The random effect is used if the levels in the study are randomly selected and the interest in the effect of the population of the levels of a factor or factors. Therefore, the general linear mixed model LMM for the response can be written y.

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The large fertility decline in the transition countries of Central and Eastern Europe is a well-known phenomenon in contemporary population economics.

These factors are the behavioral and biological factors that influence fertility directly. Cultural, psychological, economic, social, health, and environ- Page 93 Share Cite Suggested Citation: Population Dynamics of Kenya. The National Academies Press. Bongaarts and Potter quantified the effects of six of the nine proximate determinants of fertility that were shown to have the greatest effect on fertility in 41 populations: They summarized the effect of each determinant on fertility in an index, which generally ranges from 0 to 1, with 0 having the greatest inhibiting effect on fertility and I having the least inhibiting effect i. Each index not equal to 1 reduces the total fecundity rate TF , which is the level of fertility expected in the absence of any of the nine proximate determinants outlined above. Of course, no one knows what TF really is, but Bongaarts and Potter estimated that it ranges from 13 to 17, with an average of approximately 15, Below is a description of each of the proximate determinants used in this analysis and how they affect fertility. The computational procedures used to estimate each index are described in the appendix to this chapter. Percentage of Women in Sexual Union It is assumed that the number of women of reproductive age married or living with someone determines the proportion of women in a society exposed to the risk of becoming pregnant. The greater the number of women exposed, the higher is the resulting fertility. In sub-Saharan Africa, entry into union 1 has generally occurred at an early age, and although union dissolution is frequent in many regions, remarriage occurs rapidly Cochrane and Farid, Kenya has been no exception to this general pattern. Table shows the median age at first union for women 20 to 49 years. In â€” the median age at first union at the national level was At the province level, Coast Province had the lowest age at first union, As expected, Nairobi had the highest age at first union, Results from the KDHS show that age at first marriage has risen across all provinces, ranging from an increase of 0. At the national level, age at 1 In this report, the terms marriage and union are used interchangeably. Because entry into marriage may be a process not just a single event, and because a woman may live with a man without being formally married, this analysis looks at the effect of the proportions of women in sexual union, rather than marriage per se, on fertility. Page 94 Share Cite Suggested Citation:

Chapter 6 : Stalled Decline in Fertility in Ecuador | Guttmacher Institute

5 fertility decline, for a selection of countries in Distal determinants of fertility are socioeconomic factors that affect the proximate determinants, which then results in fertility outcomes.

The first period, which encompasses the late nineteenth and early twentieth centuries, was dominated by a concern about differential fertility within Western countries; in this period, leaders of the eugenics movement enlisted the services of demographers to learn how these differentials could be reduced, either by increasing the fertility of some groups or lowering the fertility of others. The second period, encompassing the s to the late s, was dominated by concern about differences in fertility and thus in population growth rates between Western countries and those countries known variously as, "less developed," "developing," " Third World ," and, most recently, "Southern. Again, policy makers turned to demographers to learn about the determinants of fertility. At the end of the twentieth century, fertility appears to have a lower place on the agenda of demographers. In some Western countries where national population growth rates are below replacement, there is increasing concern about fertility that is considered to be too low; groups that have fertility considered to be too high are largely adolescents and, in some countries, immigrants. Many Southern countries and some Western policy makers, however, remain concerned about levels of fertility, particularly in poor countries where fertility declines are just beginning. I begin by describing fertility determinants in pretransition societies those characterized by an absence of deliberate attempts to limit family size and then describe fertility transitions in Europe and the Third World. Fertility transitions are best defined not in terms of a change in level from high to low but rather in terms of reproductive practices. More precisely, in pretransition societies behavior is not parityspecific; that is, it does not depend on the number of children the couple has already borne Henry At some point in time, presumably all societies were pretransition; currently, there are few societies where fertility remains high most are in sub-Saharan Africa and even fewer where there are no signs that a fertility transition may have begun Bongaarts and Watkins Observed total fertility rates for a population are as high as twelve married Hutterites in the s and as low as four to five the Kung hunters and gatherers in the s and rural Chinese farmers around Important advances in understanding the sources of this variation followed a distinction between the "proximate" determinants of fertility and the "true" determinants of fertility, a distinction that owed much to an earlier systematic classification of influences on fertility made by Kingsley Davis and Judith Blake The proximate determinants are direct determinants of fertility, the combination of biological and behavioral channels through which the "true" determinantsâ€”the social, economic, psychological, and environmental factorsâ€”affect fertility Bongaarts In pretransition societies, the two most important of the proximate determinants of the overall level of fertility are marriage patterns and breastfeeding patterns. The other proximate determinantsâ€”fecundability the monthly probability of conceiving among women who menstruate regularly but do not practice contraception , the use of contraception, the risk of spontaneous intrauterine mortality, and induced abortion â€”play a lesser role in accounting for variations in fertility Bongaarts and Menken Marriage patterns are important, since in most societies childbearing occurs within marriage. Thus, the proportion of women who are currently married at the ages at which reproduction is physiologically possible has a major influence on fertility. There is a striking difference between the marriage patterns of Western Europe and countries of European settlement, such as the United States , Australia, and New Zealand , and societies in other parts of the world, particularly Asia and Africa. In the former, marriage has been relatively late at least since the fourteenth century, and substantial proportions of women remain lifelong spinsters. In Africa and Asia, the typical pattern has been that marriage for women is early usually as soon as a woman is able to bear a child she marries , and virtually all women marry. Obviously, the reproductive span in Western countries has been on average shorter than that in Asian and African societies. The peculiar Western European marriage pattern is associated with a nuclear family household ideal. Within marriage, the major determinants of variations in fertility across groups in populations in which little or no contraception is practiced is breast-feeding, since nursing inhibits the return of ovulation. In addition, in some societies a period of abstinence from sexual intercourse is prescribed by local custom,

often because it is believed that intercourse during this period will harm the mother or the child. Post-partum abstinence taboos have been found to vary from a few weeks to as much as a year; if these are followed, they can account for substantial variations in marital fertility. Little research has been done on the determinants of post-partum abstinence. They are clearly cultural, in the sense that they characterize societies of interacting individuals, but they may also be linked to other factors. Although differences in marriage patterns and breast-feeding patterns account for much of the observed differences in fertility across groups in pretransition societies, it is unlikely that their variation reflects variation in desired family size, for either the individual or the couple. Whether marriage was early or late, or whether breast-feeding was short or long, seems largely the outcome of other social concerns Kreager It is probable that these patterns were determined by community norms or social structures, rather than individual preferences: Communities seem to have differed more in these respects than did individuals within these communities Watkins There are evident differences not only in geography but also in timing, with Western fertility transitions occurring earlier. In addition, fertility transitions in non-Western countries were promoted by an international population movement that played a major role in making modern contraception accessible in the Third World, whereas fertility declines in the West occurred without such efforts by governments or social movements. There have recently been a number of reviews of the determinants of fertility change; taken together, they show little consensus on similarities or differences in other determinants of fertility change Hirschman ; Kirk ; Mason , although most include mortality decline, the perception that large numbers of children are increasingly unaffordable, the attitudes and moralities concerning family life, and the costs of birth control Casterline in press. The earliest sustained fertility transitions at the national level occurred in France, where fertility decline began around the time of the French Revolution , and in the United States , where fertility control was evident in a number of New England communities by the end of the first quarter of the nineteenth century and widespread among women who married on the eve of the Civil War David and Sanderson Other fertility transitions spread throughout Europe between and Coale and Watkins , with similar timing in Australia. These changes began in the core countries of northwest Europe and occurred later in the periphery of Central Europe and the Mediterranean countries. In contrast, most analysts agree that there was little evidence of efforts to deliberately stop childbearing or a decline in marital fertility anywhere in the developing world before , except for Argentina, Uruguay, and Chile largely populated by settlers from Western Europe. The observation was nearly universal that industrialization was causing this decline, with those who were in more industrial settings i. Industrialization was thought to produce a rising standard of living , an increasingly complex division of labor, an open class system, a competitive social milieu, and individualism. These changes, most thought, induced a desire for smaller families Hodgson and Watkins What most concerned observers of fertility changes was the differential fertility by class and ethnicity; the latter was particularly important in late nineteenthand early twentieth-century America, a period of massive immigration from Eastern, Central, and Southern Europe Watkins Although some early observers saw the declining fertility of the wealthy and the urban as fostering prosperity, by the last quarter of the nineteenth century most emphasized the consequences of differential fertility for the composition of the population. President Theodore Roosevelt decried the "race suicide" of upper-class women who were avoiding marriage or having small families: At the time, eugenicists worried that the "prudent and thoughtful" would be the ones to practice birth control , while knowledge of birth control was unlikely to affect the fertility of the "reckless" lower classes Hodgson and Watkins , pp. Women, according to most commentators, were the instigators of fertility decline, and many linked their turn to abortion and contraception to their reassessment of the value of motherhood. The problem was seen to be particularly acute among elite women. When initial attempts to persuade elite women to bear more children failed, attention was turned to persuading others to have fewer, and access to contraception was gradually liberalized. In Western countries the concerns of demographers and policy makers with domestic population composition faded with the widespread low fertility of the s, and the eugenics movement was dealt a serious blow by its association with Nazi Germany in the s and s. In the s, Western attention turned to population growth rates in developing countries, many of which had until recently been colonies of Western countries. Mortality was declining, but until the s, fertility in most developing countries was relatively high and

apparently stable, aside from brief fluctuations associated with wars, famines, and other upheavals. This stimulated the formation of an international population movement, an alliance of neo-Malthusians, who emphasized the problems consequent on rapid population growth, and birth-controllers, who emphasized the importance of providing women with the means to control their reproduction. Subsequently, the previous pattern of stable reproduction came to an abrupt halt with the onset of rapid fertility transitions in a majority of countries. Between the early s â€" and the late s â€" , the total fertility rate of the developing world as a whole declined by an estimated 36 percentâ€"from 6. These averages conceal wide variations among countries in the timing of the onset of transitions and their subsequent pace. At one end of the spectrum of experience are a few countries e. At the other extreme are other countries, mostly in sub-Saharan Africa, that have not yet entered the transition. These remarkable trends in reproductive behavior have been extensively documented in censuses and surveys, and the empirical record is not in dispute Bongaarts and Watkins The causes of these trends, however, are the subject of often-contentious debate. Conventional theories of fertility decline, from the modernization versions dominant in the s and s to neoclassical economic and rational actor versions of recent decades, assume the fundamental importance of socioeconomic change, much as did nineteenthcentury theories about industrialization and fertility decline. Socioeconomic development results in shifts in the costs and benefits of children and hence in the demand for them. As desired family size declines, fertility reduction soon follows with the widespread adoption of birth control, especially when governments make contraceptive services available through family-planning programs. While this broad explanation is widely accepted, analysts vigorously debate the precise variables and processes involved in this chain of causation. These disagreements have been stimulating and fruitful, producing a wide variety of increasingly refined and detailed views that have guided empirical investigations. Although rises in female marriage age have contributed to the decline in fertility, this decline is largely due to the adoption of new behavior in marriage: More precisely, it is due to the adoption of parity-specific control using modern contraceptives. In the Third World, fertility decline was closely associated with the use of modern contraceptives. Why did fertility decline? Why did couples start to deliberately limit the number of children they bore? What are the "true" determinants of fertility? While a comprehensive theory of fertility would account for both the shift from high to low fertility and variations in fertility at each stage of the fertility transition, most of the attempts to understand the social, economic, and cultural influences on fertility have focused on attempts to understand the onset of the fertility transition. Almost anything that distinguishes traditional from modern societies has been considered relevant to the explanation of the fertility decline Cleland ; see also reviews of fertility determinants by Hirschman ; Kirk ; Mason The most influential theories that have guided demographic research into the determinants of fertility over the last four decades have been those that assume the fundamental importance of economic factor. Predominant in the s and s was the theory of the demographic transition classic statements are Davis ; Freedman â€"; Notestein ; Thompson Demographic transition theory is based on the assumption that the means of fertility control used in the early stages of the Western fertility transition were always known. Hence, fertility declines can be attributed to changes in the motivations of individuals or couples, changes thought to be related to "modernization," especially increasing literacy, urbanization, the shift to paid, nonagricultural labor, and declines in infant and child mortality. Neoclassical economic theory, and in particular the New Home Economics associated with Gary Becker , provides a translation from macrolevel structural changes to the micro-level calculus of parents for a more thorough review, see Pollak and Watkins Empirical examinations driven by these theories gave them some support. It is now generally acknowledged that economic factorsâ€"often described in terms of the "costs" and "benefits" of childrenâ€"are important determinants of fertility decline. It is, however, also acknowledged that economic factors do not provide a complete explanation. Currently, interesting research focuses on several additions to classical demographic transition theory and to neoclassical economic approaches. Much attention has been devoted to evaluating the role of family-planning programs in the fertility decline in the Third World, where it seems that the methods used initially in the West were either not known or considered too costly in personal terms Knodel et al. In the s, it became evident that population growth rates in Third World countries were high because of declining mortality but stable fertility. This led to concerted efforts by international agencies, Western governments, and

Third World countries themselves to reduce fertility by making modern contraception desirable and accessible in the Third World Hodgson and Watkins There has been considerable debate about the effectiveness of these efforts, with some according them little importance e. There was a significant impact on fertility levels in the late s, but whether this program effect operates primarily by affecting the timing of the onset of the transition or by the pace of fertility decline cannot be determined with available data Bongaarts and Watkins There has also been considerable interest in institutional determinants of fertility change. These are typically social institutions e. Therefore, in understanding the frequent association between education and fertility decline, for example, it may be more relevant to ask what proportion of the community has attended school than to ask whether a particular individual has. Similarly, both class relations and gender relations are aspects of the community rather than the individual, and both are likely to be associated with fertility change. Another perspective emphasizes ideational change. Ideational changes are sometimes broadly, sometimes more narrowly, defined. Among the former is a shift in ideational systems toward individualism, which offered justification for challenging traditional authorities and practices, including those that concerned reproduction Lesthaeghe In a similar vein, John Caldwell argues that much of the fertility decline in developing countries can be explained in terms of the introduction of images of the egalitarian Western family into the more patriarchal family systems of the developing world. It was not so much that the relative balance of costs and benefits of children changed, but that the moral economy shifted: Among the narrower ideational changes are reevaluations of the acceptability of controlling births within marriage Watkins in press and changes in the acceptability of modern family planning Cleland and Wilson Explanations for fertility declines in terms of ideational change are often linked to a focus on diffusion as an important mechanism of change, where diffusion can be postulated as stemming from a central source such as the media e. It is likely that personal networks influence fertility through social learning and the exercise of social influence Montgomery and Casterline Intensive efforts to examine local networks of social interaction and their relation to fertility are currently underway in several countries Agyeman et al ; Behrman et al.

Chapter 7 : Determinants of fertility in Ethiopia

1 Determinants of Fertility Decline in Malawi: An Analysis of the of Proximate Determinants Introduction The subject of demographic transition has been one of the principle.

Chapter 8 : Fertility Determinants | calendrierdelascience.com

Analysis of the Determinants of Fertility Decline in the Czech Republic Stephan Klasenâˆ— and Andrey Launovâ€ June 15, Abstract In this paper we study the decline in total fertility rates in the Czech Republic.