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# The Intended and Unintended Side Effects of the Millennium Development Goals

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## Abstract

The United Nations' Millennium Development Goals (MDGs) have become the consensus framework of international cooperation over the last decade. These eight goals and twenty-one targets represent the operationalization of common concerns into quantifiable measures of progress that can be employed to hold accountable all 189 participating nations. With 2015 as a benchmark year for assessing progress towards the MDGs, the international community has an opportunity to reflect on their successes, discuss setbacks and challenges and, if necessary, recalibrate their individual approaches towards progress post-2015. This research explores the intended and unintended side effects of MDGs to discern if they are effective in promoting their goals jointly or if progress towards some goals interferes with progress towards the achievement of other goals. Two rival hypotheses about the effectiveness of MDGs are explored, which I term the "synergy" theory, as articulated by Maria C. Lo Bue and Stephan Klasen, and the "crowding out" theory, as championed by Sakiko Fukuda-Parr and Alicia Ely Yamin. This research tests these two theories against cross-national, statistical and correlational evidence as well as case studies from three middle-income countries from the Maghreb region of North Africa: Algeria, Morocco, and Tunisia. Preliminary results suggest that there are overall mixed results for both theories, leading to two additional hypotheses: culture, economic starting point and regime type may exert influence on progress towards the MDGs. I anticipate the results from these case studies will positively correlate with each country's economic starting point and responsiveness of its political institutions, while culture will not have as much influence on countries' ability to achieve MDGs.

**Keywords: Intended, Unintended, Millennium Development**

## 1. Introduction

The Millennium Development Goals (MDGs) were introduced by the United Nations in 2000 to address global issues ranging from eradicating extreme poverty to achieving universal primary education, improving maternal and child health as well as ensuring environmental sustainability. Despite differences across countries, the international community has cooperated to address common challenges operationalized in eight goals and twenty-one targets. These goals are matched by quantifiable measures of progress that can be used to hold accountable 189 participating nations. The MDGs have become the consensus framework of international cooperation for the last decade.[1] With 2015 as a benchmark year, the international community has an opportunity to reflect on the successes of the MDGs, discuss setbacks and challenges and, if necessary, recalibrate their individual approaches.

This paper will explore whether the MDGs are effective in promoting eight goals jointly (what I term the "synergy" theory) or if progress toward some goals interferes with progress toward the achievement of other goals (what I call the "crowding out" theory). I will "test" these two theories against evidence from quantitative data across many

countries and case studies of three middle-income countries from the Maghreb region of North Africa: Algeria, Morocco and Tunisia.

## 2. Literature Review

Two theories generate rival hypotheses about the effectiveness of MDGs: what I call the "synergy" theory articulated by Lo Bue and Klasen and what I term the "crowding out" theory championed by Fukuda-Parr and Yamin.

### 2.1. "Synergies" Approach

According to Lo Bue and Klasen[2] the drafters of the MDGs intended that they be mutually supportive: where progress towards one target will also speed up progress toward other targets, creating a positive synergy. For example, improving the share of girls in schools (Goal 3) can be expected to speed up progress in achieving universal primary completion rates (Goal 2) as educated women tend to invest more in the education of their children. Similarly, greater female education (Goal 3) can be expected to reduce early marriage rates and improve health knowledge, thereby helping to reduce maternal mortality (Goal 5). Building on extensive literature proposing that the MDGs are interlinked, they explore these synergies through a bivariate cluster analysis which groups countries based on their overall performance in achieving the MDGs.[3]Their cluster analysis differentiates between good, bad and partial performers. Evidence for positive synergies are mainly found among "good performing" countries, like China, Malaysia, and Tunisia, who experience rapid economic growth. Evidence for negative synergies can be found predominantly among countries in Sub-Saharan Africa, where regress in one MDG yielded regress in another similarly linked goal. However, they also find some instances of "partial performers", such as Algeria and Morocco, where progress in some goals coexists with poor performance in others.

Synergies among MDGs depend on specific country characteristics such as ethnic fractionalization, changes in political violence, income levels, the nature of policy interventions to reach MDGs, and the strength of the particular channel or institution that links progress of different MDGs.

### 2.2. The "Crowding Out" Approach

Fukuda-Parr and Yamin hypothesize that not only are MDGs not necessarily mutually supportive or unsupportive, but that they may in fact compete with one another for scarce resources. They concede that the MDG framework has been very effective at focusing attention and policy on many important development challenges.[4] The intended consequence, they note, is to draw the attention of the international community to important but often neglected social priorities, which the MDGs do very well.

However, Fukuda-Parr and Yamin argue that the implementation of the MDG framework has had *unintended* consequences that may reduce their positive impact. They argue that the MDGs are fairly modest in their objectives and that a narrow focus on the MDGs may distort priorities and divert attention from more ambitious reforms. They posit that by favoring narrow, easily achievable targets with immediate and quantifiable results, policymakers, civil society groups, and international donors may marginalize other more elusive targets that can be imperative to long-term benefits. For example, according to Yamin and Boulanger, the framing of Reducing the Maternal Mortality Ratio (Goal 5) sidelined broader sexual and reproductive health issues by only emphasizing certain health programs that treated symptoms, such as providing access to midwives, but neglected to treat the causes, mainly lack of access to contraceptives, that could prevent many women from having high-risk pregnancies.[5] Likewise, Unterhalter's study demonstrated that progress towards Achieving Universal Primary Education (Goal 2) eclipsed other important objectives, such as improving the quality of education, that were being pursued under the 'Education for All' agenda.[6]

Fukuda-Parr and Yamin also worry that the need to make MDGs politically palatable to a broad range of countries resulted in the prevalence of goals that set the bar too low for some countries while promoting aspirational and unrealistic goals for others. For example, controversial topics, such as the full inclusion of women in society, were replaced with more modest and vaguely-worded goals such as "ensuring gender equality", which is defined narrowly as achieving gender equality in schools at all levels. Operationalized as this 'one-size-fits-all' approach, the MDGs have resulted in some targets being easily achievable for some countries while other countries had to build from the ground up to reach the same broad measurement for progress. This is also evidenced in primary education targets: whereas more developed countries had little problem meeting target 2.A (ensure that, by 2015, children everywhere,

boys and girls alike, will be able to complete a full course of primary schooling), other less developed countries struggled more to meet this goal due to lack of infrastructure and resources.[7]

Another critique articulated by Fukuda-Parr and Yamin is that the goals encouraged narrow, vertically structured implementation approaches that relied heavily on technological solutions rather than deeper social reforms.[8] Hunger targets, for example, promote short-term improvements such as nutritional supplements over long-term, broad range of actions such as eliminating food insecurity as outlined in the 1996 World Food Summit. Again, this results in targets that address the 'symptoms' rather than the fundamental 'causes' of hunger and food insecurity worldwide.[9]

## 2.3. Hypothesis

The scholarly literature on MDGs introduced in the previous section provide two rival theories that seek to explain the nature of countries' progress toward the MDGs. Three hypotheses were derived from these rival theories:

1. Progress toward MDGs should advance together. This is the "synergy hypothesis"
2. Countries may show uneven records as progress towards some MDGs marginalize progress towards others. This is the "crowding out hypothesis".
3. MDG goals and targets are framed towards short-term, easily achievable targets. Progress will be concentrated in these areas to the detriment of more substantive reform. This is the "low-hanging fruit hypothesis".

To assess the low-hanging fruit hypothesis, the MDGs will be independently grouped into "easy to achieve" and "harder to achieve" subgroupings based on the reasoning of Fukuda-Parr and Yamin and their collaborators.[10]

- **Easy to achieve:** Goals by which simple, technological fixes and/or limited policy adaptation suffice to promote progress. The goals include Halving the Proportion of Extreme Poverty (Goal 1), Achieving Universal Primary Education (Goal 2), Promoting Gender Equality (Goal 3), Combating HIV/AIDS (Goal 6) and Halving the Proportion of People Without Access to Safe Drinking Water (Goal 7)
- **Harder to achieve:** Goals that require more substantial policy adaptations than under the "easy to achieve" subgrouping, imply substantive social policy shifts and/or require larger-scale collaborative efforts with NGO's and other agencies. The goals include Reducing Child Mortality (Goal 4) and Improving Maternal Health (Goal 5)

Fukuda-Parr and Yamin point out that some of the goals garnered significant attention in terms of funding as well as programs and research, while others were marginalized and made little progress.[11] They hypothesize that those that received the most attention were those that were considered "low-hanging fruit". Combating HIV/AIDS (Goal 6) was grouped under "easier to achieve" due to the pre-existing momentum of other international agendas already galvanized around this goal and the relatively simple technological solution of providing antiretroviral (ARV) drugs to halt the spread of the disease. Similarly, Halving the Proportion of People Without Access to Safe Drinking Water (Goal 7) was considered "Easier to Achieve" due to the existence of ready technological fixes, such as increasing access to wells and water purification systems, and relatively simple infrastructural changes such as improving sewage systems. Halving the Proportion of Extreme Poverty (Goal 1) was judged as "Easier to Achieve" due to the fact that it only targets extreme poverty (defined as living on less than $1.25 a day) instead of relative poverty (defined as living on less than $2 a day) or the national poverty rate. Hence, the rate of extreme poverty dropped to 14 percent in 2015[12] primarily due to India and China's rapid economic growth which accounted for a majority of the world's population being lifted out of extreme poverty.

Achieving Universal Primary Education (Goal 2) and Promoting Gender Equality (Goal 3) were promoted concurrently through target 3A which aims to eliminate gender disparity in primary and secondary education, preferably by 2005, and in all levels of education by no later than 2015. Fukuda-Parr (2013) points to the low-starting point of this education goal which encouraged some countries in Latin America and Asia to dismiss the goal as 'regressive' because they had already achieved it. Further, comprehensive social welfare incentive programs, such as Brazil's *Bolsa Familia*, have proven to be successful by incentivizing parents to send their children to school if they want to receive federal welfare[13].

Reducing Child Mortality (Goal 4) and Improving Maternal Health (Goal 5) are considered "Harder to Achieve" due to their extensive coordination of international and national policies as well as their need for the cultural acceptance of contraceptives to decrease the incidence of high-risk pregnancies. While addressing the maternal health targets is likely to promote reductions in child mortality, Fukuda-Parr mentions that this specific goal and its targets neglect to explicitly address the need to increase access to contraceptive health, resulting in more women being pregnant without access to the healthcare they need and thus being at higher risk for complicated births.[14] Lack of access to midwives and health clinics is a complex deterrent to progress that increases the likelihood of maternal and child death. This is evidenced by the 31 percentage point gap between urban and rural areas in the coverage of births attended by skilled health personnel, but even this large disparity masks the range of inequalities among regions. The largest difference between rural and urban coverage is found in Central Africa, at 52 percentage points[15].

## 3. Research Design and Analysis

To test the "synergy", "crowding out" and "low-hanging fruit" hypotheses, this paper utilizes MDG progress index scores generated by the Center for Global Development for 2011 to measure progress toward each of the goals and their relationship to one another. The index provides progress scores for each of the eight goals where a score of 0 represents no progress, 0.5 signifies some progress and 1 indicates that a particular goal was "on track" to being achieved or had been achieved.[16]The sum of these scores, adjusted for available data, produces an overall score of 0-8. These index scores are utilized to run correlations between MDGs and find the average overall index scores. Ranging from a negative one (-1) indicating perfect negative correlation, 0 reflecting no correlation, and a positive one (1) indicating perfect positive correlation. Table 1 shows the correlation results.

Table 1 Correlations between MDGs

| MDGs | Eradicate Extreme Poverty 1 | Achieve Universal Education 2 | Gender Equality 3 | Reduce Child Mortality 4 | Maternal Health 5 | Combat HIV/AIDS 6 | Access to Safe Drinking Water 7 |
|---|---|---|---|---|---|---|---|
| Average Overall MDG Score | 0.51 | 0.59 | 0.65 | 0.55 | 0.39 | 0.35 | 0.61 |
| Eradicate Extreme Poverty 1 | 1.000 | | | | | | |
| Achieve Universal Education 2 | 0.011 | 1.000 | | | | | |
| Gender Equality 3 | 0.095 | 0.122 | 1.000 | | | | |
| Reduce Child Mortality 4 | 0.089 | 0.218 | 0.142 | 1.000 | | | |
| Maternal Health 5 | 0.173 | 0.169 | 0.249 | 0.340 | 1.000 | | |
| Combat HIV/AIDS 6 | -0.121 | -0.164 | -0.004 | 0.224 | 0.229 | 1.000 | |
| Access to Safe Drinking Water 7 | 0.300 | 0.249 | 0.080 | 0.133 | -0.047 | -0.066 | 1.000 |

The data show that there is only weak evidence for the synergy hypothesis, which would lead us to expect MDGs to advance together. There are some isolated instances where some goals demonstrate some synergy, but others do not. For example, the most statistically significant correlation of +0.34 was between Reducing Child Mortality (Goal 4) and Improving Maternal Health (Goal 5), which failed to reach a 0.5 partial correlation. In addition, there is a positive correlation of +0.25 between Improving Maternal Health (Goal 5) and Promoting Gender Equality (Goal 3). However, there is very little correlation between most goals, which signals that there is a lack of uniform progress. A negative correlation between Combating HIV/AIDS (Goal 6) and Achieving Universal Primary Education (Goal 2), demonstrates that progress toward one goal may not promote progress in another or may, in fact, crowd it out.

Precisely because there are such mixed results across MDGs, there is some evidence for the "crowding out" hypothesis. To reiterate, the "crowding out" hypothesis suggests that countries may show uneven records, as progress towards some MDGs "crowd out" progress towards others. The fact that there seem to be some positive, although statistically weak, correlations on some goals and not on others demonstrates that progress towards some goals may have demanded more government attention, effectively "crowding out" policy space for other goals to progress as well. The data show that progress towards Improving Maternal Health (Goal 5) yielded the most positive correlations across all other goals, while Halving the Proportion of People Without Access to Safe Drinking Water (Goal 7) yielded the weakest correlations, likely due to governments emphasizing progress toward achieving Goal 5 over Goal 7.

Why some goals see more progress than others may be explained by the "low hanging fruit" hypothesis, which suggests that progress should be concentrated in the "easier to achieve" goals which require only a ready technological fix. The average overall MDG scores reveal a different picture however: As Figure 1 shows, although progress toward goals that are "Easier to achieve" received predominantly high progress scores, Combating HIV/AIDS (Goal 6) proves to be the exception, with the lowest overall progress score of 0.35.

| MDG Classification | Average Overall Progress Score |
|---|---|
| **Easier to Achieve** | |
| Halving the Proportion of Extreme Poverty (Goal 1) | 0.51 |
| Achieve Universal Primary Education (Goal 2) | 0.59 |
| Promote Gender Equality (Goal 3) | 0.65 |
| Combating HIV/AIDs (Goal 6) | 0.35 |
| Halve the Proportion of People Without Access to Safe Drinking Water (Goal 7) | 0.61 |
| **Harder to Achieve** | |
| Reduce Child Mortality (Goal 4) | 0.55 |
| Improve Maternal Health (Goal 5) | 0.39 |

Figure 1 Low Hanging Fruit Groupings

This anomaly is particularly interesting because Combating HIV/AIDS (Goal 6) was specifically singled out by Fukuda-Parr and Yamin as a goal that would be "cherry-picked" by national governments because it enjoys the pre-existing international momentum from previous HIV/AIDS agendas of the 1990's and it has the easiest technological fix of providing antiretroviral (ARV) drugs.[17] Likewise, while Improving Maternal Health (Goal 5) was expected to be harder to achieve, with 0.39 average progress score, the other "Harder to Achieve" goal saw progress commensurate with easier targets (Goals 1 and 2). Thus, there is inconclusive support for the "low-hanging fruit" hypothesis, suggesting there are other influences at work.

To explore these relationships more in-depth and gain insights into the causal mechanisms that may support or undermine synergies, the remainder of this paper will explore three case studies from the Maghreb region: Algeria, Morocco, and Tunisia. A case study is an appropriate method of analysis because it allows us to seek out the specific causal mechanisms that promote or weaken synergies and crowding out over a specific period of time (1990-2014), as revealed by the larger country analysis developed above. A case study also allows us to explore what other factors may influence the weak correlations between MDGs described in the data analysis.

## 3.1 Why the Maghreb?

Assessing the Maghreb region in particular provides several important advantages for understanding the unintended side effects of MDGs. The Maghreb offers unique insights into how low-to-middle income countries shaped their paths towards achieving MDGs by the 2015 benchmark. In addition, the similar cultural and colonial history of these countries allow us to partly control for culture and its effect in achieving MDG progress. Controlling for culture is important because it is widely believed that culture influences the development of civil society and practices which promote social, economic and political solidarity in the absence of equitable policies.[18] Because all three of these countries share similar cultures, any variation in the progress toward meeting the MDGs is less likely to be explained by culture.

Another commonality in this region that makes it worthy of being included as a case study is its economic development. These countries are labeled as low-to middle income by the World Bank, which is defined as economies with a GNI per capita of more than $1,045 but less than $12,736.[19]The global economic downturn of 2008 affected the Maghreb greatly, with GDP per capita figures stagnating and foreign direct investment figures dropping significantly in Morocco and Tunisia and increasing minimally (+0.5 between 2008-2009) in Algeria.[20] Thus, they should face similar, but not equal economic constraints in meeting the MDGs, and should show similar, but not equal patterns of progress toward meeting the MDGs if economic resources are a primary explanatory factor.

Although these countries were classified as "authoritarian" regimes, they vary by regime type for the period under consideration (2000-2011), as there is some variation in the opportunities for political participation across regimes.[21] Algeria and Tunisia are republics, although Algeria has more authoritarian tendencies and Tunisia has more socialist

leanings, while Morocco is a constitutional monarchy, according to the *Freedom House Level of Political Freedom Index*[22]. This index rates Algeria as "Not Free", Morocco as "Partly Free" and Tunisia as "Not Free" for 2011.[23]

## 4. Case Study Findings

This section elaborates on the trends found in the Maghreb to find the causal mechanisms that may explain patterns of "synergies", "crowding out" or "low-hanging fruit". Table 2 serves to provide an overall snapshot of the countries. Individual country analyses of MDG progress are developed to elaborate on the information provided in table 2.

Table 2 Progress toward MDGs in Algeria, Morocco and Tunisia

| | Algeria | Morocco | Tunisia |
|---|---|---|---|
| Goal 1: Halve Proportion of Population in Extreme Poverty | No Data | Off Target | On Target |
| Goal 2: Achieve Universal Primary Education | Some Progress | Some Progress | On Target |
| Goal 3: Promote Gender Equality and Empower Women | On Target | Some Progress | Achieved |
| Goal 4: Reduce Child Mortality by 2/3 | Some Progress | On Target | Some Progress |
| Goal 5: Improve Maternal Health | On Target | On Target | Some Progress |
| Goal 6: Combat HIV/AIDS | On Target | On Target | On Target |
| Goal 7: Halve Proportion of People Without Access to Safe Drinking Water | Off Target | Some Progress | On Target |
| Overall Progress (Index Scorecard out of 8): | 4 | 5 | 5.5 |

(Table 2-Source: Center for Global Development MDG, Progress Index Scorecard)

### 4.1 Algeria's MDG Progress

Due to its overall very uneven progress, Algeria provides little evidence for the "synergy" theory. With three goals being "On Target," two demonstrating "Some Progress," one "Off Target" and another displaying "No Data," Algeria demonstrates that progress in some goals does not necessarily equate progress in others. For example, one could expect that Algeria's emphasis on progress toward health related goals, such as Combating HIV/AIDS (Goal 6) and Improving Maternal Health (Goal 5), would include progress toward Halving the Proportion of People without Access to Safe Drinking Water (Goal 7), given that access to safe drinking water reduces incidences of water-borne illnesses. Yet, Algeria demonstrates that this is not necessarily the case, as it was "Off Target" for Goal 7. This relationship also serves to demonstrate that Algeria shows strong support for the "crowding out" theory.

Algeria provides little evidence for the "low-hanging fruit" hypothesis. Among the goals grouped as "Easy to Achieve", Algeria was "On Target" for two goals, Promoting Gender Equality (Goal 3) and Combating HIV/AIDS (Goal 6), made "Some Progress" toward Achieving Universal Primary Education (Goal 2), was "Off Target" for Halving the Proportion of People without Access to Safe Drinking Water (Goal 7) and provided "No Data" for Halving the Proportion of People Living in Extreme Poverty. Because there is such variation across the "Easy to Achieve" goals, Algeria's example cannot affirm the "low-hanging fruit" hypothesis. Further, Algeria demonstrates "Some

Progress" and was "On Target" for the "Hard to Achieve" goals (Goals 4 and 5), which highlights that the "low-hanging fruit" hypothesis does not apply to Algeria's case study.

## 4.2 Morocco's MDG Progress

Morocco provides mixed results for the "synergy" and "crowding out" theories. Some support for the "synergy" theory is seen in the overall positive trends towards being "On Target" and seeing "Some Progress" among the goals, with the single exception of Halving the Proportion of People Living in Extreme Poverty (Goal 1), which was "Off Target". Its "On Target" progress toward the health MDGs (Goals 4, 5 and 6), demonstrate some synergies as they were promoted jointly through national initiatives to increase access to health clinics.

Although Morocco does not show as much variance between the goals as Algeria does, some support for the "crowding out" hypothesis can be found in the uneven progress between some goals to the detriment specifically of progress toward Goal 1. Morocco's emphasis toward the health MDGs and promoting "Some Progress" toward the social equality goals (Goals 2 and 3) may have diverted focus away from policies aimed at reducing the Proportion of People Living in Extreme Poverty (Goal 1). However, a more likely explanation for why Goal 1 was "Off Target" can be attributed to the large disparities between urban and rural areas: national policies disproportionately benefit urban over rural areas in Morocco; and in a country whose rural areas encompass 43% of the population and seven out of ten poor persons, prioritizing Goal 1 would not produce much immediate success.[24] In this case, the target was set too high to realistically achieve progress within the given time frame and likely set Morocco up for failure.

As mentioned, Morocco prioritized progress toward the health MDGs (Goals 4, 5 and 6), of which only Goal 6 is "Easy to Achieve". The other "Easy to Achieve" goals (Goals 2, 3 and 7) saw "Some Progress" and an "Off Target" (Goal 7). This variation among the grouping provides little support for the "low hanging fruit" hypothesis. Morocco's "On Target" progress toward Goals 4 and 5 further discredits this hypothesis since they are grouped under the "Hard to Achieve" grouping. To the extent there was evidence for "low-hanging fruit", it was found in Combating HIV/AIDS (Goal 6), an "Easy to Achieve" goal.

## 4.3 Tunisia's MDG Progress

Tunisia provides the strongest evidence for the synergy theory. It excelled in meeting the majority of its goals simultaneously, mostly showing uniform progress. For example, it succeeded in Achieving Gender Equality (Goal 3) as female school enrollment rates progressed significantly to attain equality at primary and secondary school by 2002 (beating the 2005 goal target by three years), and achieved a 0.96 enrollment ratio at the tertiary level.[25]Economically, gender equality was promoted through government strategies aimed at creating maximum number of jobs with no gender distinction between job applicants. As a result, female participation in the workforce increased to 27% of total labor force by 2004, with women participating primarily in the industrial sector. Female participation in the legislature was achieved through President Ben Ali's earmarking of 25 percent of the slots in the governing party's legislative slates to women, resulting in Tunisia's legislation having one of the highest percentages of women in a national legislature in the world.[26]

All of these achievements contributed to progress in all the other goals: with a strong educational system that prepares women to be valued members of the workforce, income inequality decreases, which promotes progress towards Halving the Proportion of the Population in Extreme Poverty (Goal 1). Increased affluence leads to increases in the Proportion of People with Access to Safe Drinking Water (Goal 7), as people migrate from rural areas to urban centers. Access to safe drinking water also improves health for mother (Goal 5) and child (Goal 4), who become less prone to suffering from water-borne illnesses and can be healthy enough to attend school and work, thus increasing primary school enrollment (Goal 2). It goes without saying that progress towards reducing proportion of extreme poverty yield progress towards combating HIV/AIDs as the population is able to afford treatment and benefits from better access to healthcare. To achieve such well-rounded progress, the Tunisian government focused on social welfare packages and increasing the minimum wage, which bolstered the average household purchasing power by about 2 percentage points annually between1990-2006.[27]

To the extent that full progress wasn't achieved, it can be attributed to regional disparities in access to emergency health care and deficient rural infrastructure. This regression in progress could be indicative of a slight crowding out effect by which limited progress in improving maternal health (Goal 5) slows progress toward reducing infant mortality (Goal 4). However, Tunisia displays minimal evidence for the "crowding out" hypothesis. The only possible instance of the "low-hanging fruit" hypothesis can be found in Promoting Gender Equality (Goal 3), an "Easy to Achieve" goal. Since Tunisia "Achieved" the goal before the 2015 benchmark, it is evident that the bar was set too

low for this goal and Tunisia was able to effortlessly implement the targets, and thus the goal wasn't "low-hanging fruit" so much as it was fruit fallen from the tree, ripened and ready for consumption. A more adequate target for Goal 3 would have been to include a target measure for the quality of education. This target would be more challenging for Tunisia to achieve, but it would do great good for ensuring that all school-age Tunisians aren't just going to school, but that they are receiving an education that will prepare them to pursue jobs in the global market.

As our case study analysis demonstrates, Tunisia displays a different narrative than its Maghrebi neighbors. It is evident that the main difference between the three case studies is that the Tunisian government actively pursues institutional support mechanisms that consider regional disparities resulting in widespread policy outcomes that have resulted in substantial achievement and progress of MDGs.[28] The overarching conclusion from the case studies is that they corroborate the broader correlational studies findings (see Table 1).

## 5. . "If Not Synergies, Nor Crowding Out Then What?" Discussion On Rival Hypotheses

Given that the correlations between MDGs developed in Table 1 are statistically meager and that the case study results are mixed at best, the authors of the theories discussed in this paper left some clues for further inquiry. Lo Bue and Klasen allude to determinants for group membership in their cluster analysis,

> '…In particular, we look at some structural factors such as institutions, ethnic fractionalization as well as changes in political violence and in income levels and distribution and analyze how these can affect [country] membership in the [cluster]. We find that growth in GDP per capita is particularly important in distinguishing between good and bad performers, while a poor institutional framework and deteriorations in the income distribution increase the likelihood of being a partial performer where synergies are lacking.'[29]

Fukuda-Parr and Yamin do not explicitly devote explanations to other factors influencing progress towards MDGs but they do highlight a weakness of the MDGs being that they "fail to capture the processes of social change that are fundamental to an emancipatory vision of development".[30] Hence, economic and political institutions are key to promoting the social change that underlies development and may affect a country's progress in achieving MDGs.

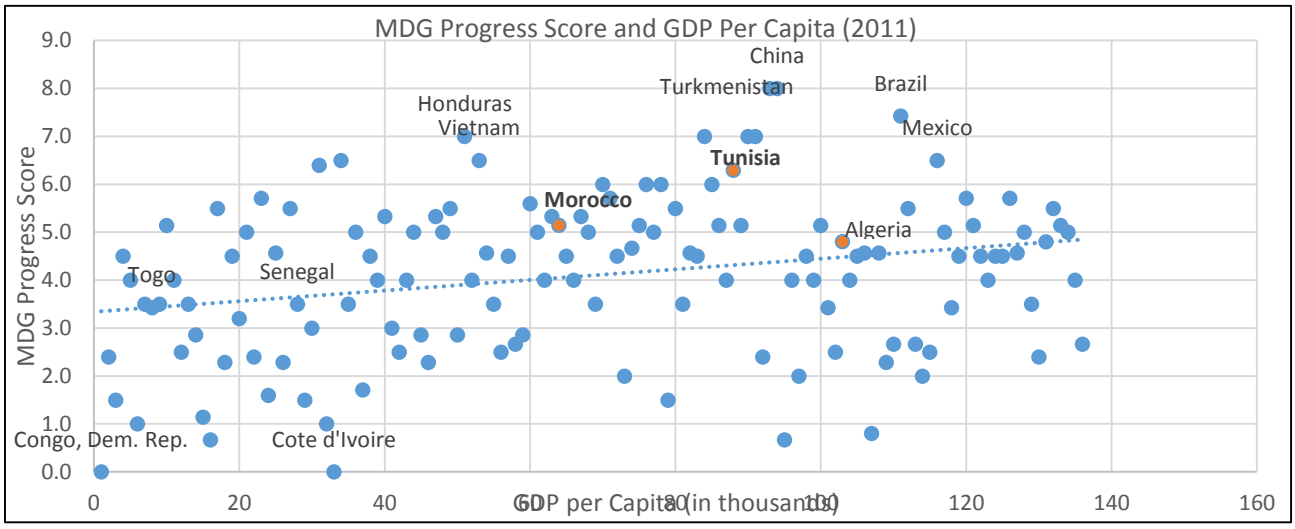
This section will briefly explore the effects of regime type and economic standing as impeding factors in promoting progress towards the MDGs in the Maghreb. As discussed in the Research Design section, culture is used as a control to explain that religion and customs aside, these countries still had varying results in their progress. Data for income level is drawn from the World Bank's *World Development Indicators,* emphasizing GDP per Capita as a more realistic depiction of the case studies' economic standing.[31] To calculate regime type, two data sets are employed: Freedom House's *Freedom in the World* Country ratings[32] and the Center for Systemic Peace's *Polity IV* Regime Polity Score[33]. All data is from 2011 as that was the year with the most complete information.

### 5.1 Economic Starting Point

Economic starting point can influence the policies taken by countries when presented with frameworks such as the MDGs. One could expect that MDG Progress Scores will be greater in higher-income countries since they have the resources and infrastructure present to implement policies.

Graph 1 observes a relationship between MDG progress and GDP per Capita: the trend line is positively sloped between MDG Progress Scores 3 and 5 with majority of data points falling between 20,000 and 60,000 GDPP. This scatter plot demonstrates some support for the hypothesis that countries with higher GDP should have higher MDG progress scores, as is evidenced by Brazil's 111,000 GDPP (USD) and its 7.4 MDG progress score and China's 8 MDG progress to it 94,000 GDPP (USD). Similarly, evidence for a relationship between countries with low GDPP achieving little MDG progress is also visible through the examples of Democratic Republic of the Congo and Cote D'Ivoire (Ivory Coast), who achieved 0 MDG Progress scores and had GDPP of less than 40,000. However, the slope of the positive trend line and the wide dispersion of the data around the trend suggest a weak relationship between economic starting point and MDG progress.

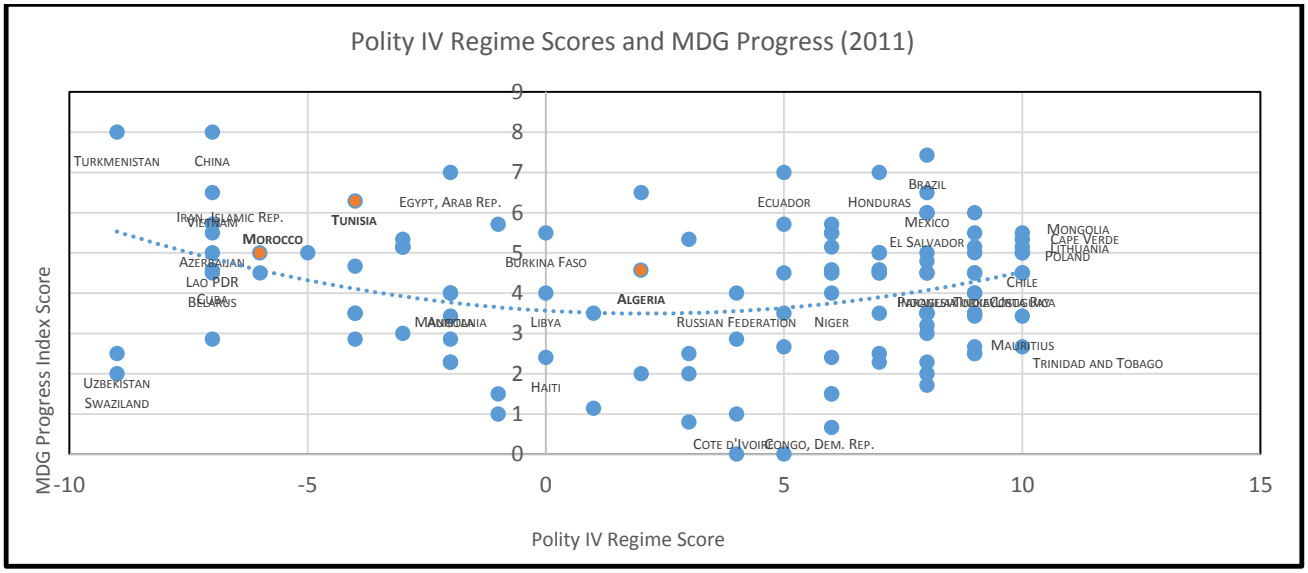
Graph 1 MDG Progress Score and GDP per Capita (2011)




## 5.2. Regime Type

Political institutions can impede or promote progress toward MDGs by deciding which policies to prioritize. Authoritarian regimes, while more conducive to efficiency due to their limited bureaucratic channels, are also more prone to volatility, which disrupts and discourages development progress. Democratic regimes are hypothesized to enjoy more stable sociopolitical environments that are amenable to foreign investment and international collaboration toward MDG progress. A drawback is that democratic regimes involve bureaucracy, which can delay the efficiency with which policy is drafted and implemented. The hypothesis proposed is that more democratic regime types will see the most progress towards MDGs.

Graph 2 Polity IV Regime Scores and MDG Progress (2011)




Graph 2 shows the relationship between MDG progress scores and Polity IV regime scores, which range from -10 (hereditary monarchy) to +10 (consolidated democracy).

The graph seems to suggest a stronger relationship than between economic starting point and MDG progress score as there is are stronger concentrations of countries on the positive x-axis, meaning that they have more democratic regimes, which also show a range of MDG progress. Countries such as Brazil, achieve the highest MDG progress score of 7.4 and a Polity IV score of 8, demonstrating that transitioning from an autocratic government to a more democratic one can provide more support for coordinating national MDG efforts. However, Turkmenistan (8, -9) and China (8, -7) demonstrate optimal MDG progress but authoritarian regime tendencies. These countries may reduce the strength of the relationship between democratic regimes and MDG progress.

## 6. . Summary

This research has presented an analysis of two rival theories regarding the side effects of the Millennium Development Goals (MDGs): Lo Bue and Klasen's "Synergy" theory and Fukuda-Parr and Yamin's "Crowding Out" theory. With overall mixed results indicating some evidence for both theories, the case studies reinforced the patterns of the broader correlational data set. Preliminary results indicate a stronger relationship between regime type and MDG progress than between economic starting point and MDG progress. The prevalent conclusion is that it is a combination of the nature of MDGs, through synergies, crowding out and low-hanging fruit, as well as economic starting point and regime type, which influence a country's MDG progress.

Because these factors were analyzed with the help of the World Bank, Freedom House and the Center for Systemic Progress and other UN agencies, lack of consistent data and reporting were shortcomings that may have impacted results. Specifically, Lack of consistent data among countries studied extending into 2015 from Polity IV prevented the analysis of these factors to include how regimes in the Maghreb (specifically Tunisia) may have progressed as a result of the Arab Spring of 2011. It is important to note that the "Low-Hanging Fruit" Groupings (Figure 1) were designed based on the author's extrapolation of Fukuda-Parr and Yamin's reasoning for the "crowding out theory" and their collaborators, mainly Unterhalter, Yamin and Boulanger as well as Fukuda-Parr's other working papers on the subject matter, and as a result, groupings may be inconsistent with real world application of these observations.[34] [35] [36] [37] Further research is suggested to provide a more complete picture of the impact and side effects of the MDGs as we move into a new phase with the Sustainable Development Goals.

## 7. Notes

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