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GENDER EQUALITY AND THE KNOWLEDGE SOCIETY

NATIONAL ASSESSMENTS ON GENDER AND STI

BRAZIL

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INTRODUCTION

This document is a preliminary report of the activities developed by the Brazilian research team in charge of researching and organizing relevant quantitative data on Gender and STI, according to the OWSD – WIGSAT project National assessments of gender, science, technology and innovation (STI): Framework for Gender Equality and the Knowledge Society (GEKS).

This report is divided into four topics. An Introduction clarifies the scope of the GEKS country assessment and describes the Brazilian research team and its main activities. Technical Notes defines the basic rules and criteria used in the search for data and indicators suggested in the Framework. It also details some of the difficulties encountered during research, especially those related to data aggregation and/or disaggregation and to data unavailability and suggested proxies. Comments on selected indicators and trends attempts to analyze what we can learn from data included in the selected indicators as far as women's advancement in Brazilian society are concerned. After that both inputs and outcomes indicators are presented. Each indicator includes a table or a graph followed by data sources and technical specifications and/or definitions.

The mandate of the Brazilian quantitative research team was to look for indicators that could respond to three of the main questions addressed by the proposed Framework on Gender Equality and the Knowledge Society:

- What are the preconditions for women to become full participants in a national knowledge society?
- What resources and access do they need to achieve this?
- Where, when and how fast are women making progress?

The research team was composed of one senior researcher (a sociologist and demographer), two demographers and one graduate demography student. Research was initiated in July 2011. Work has involved an exhaustive search for indicators already produced and made public by national and international organizations as well as original tabulations from micro databases available or made available especially for this project. It has also included a bibliographical search for papers or articles published or presented in specialized conferences and seminars by individual authors.

TECHNICAL NOTES

Time period covered

The period 2000–2010 was used as the time reference for the indicators selected. However, most data from the Brazilian 2010 Demographic Census were not available at the time of the research. Thus the alternative used was to define data from the Brazilian Household Surveys – *Pesquisa Nacional por Amostra de Domicílios (PNAD)* – as the main data source. This is an annual survey, available yearly for each non-census year that gathers information from a national and regional representative sample, excluding only rural areas of the Northern Region. Available for the decade of the 2000 (2001 to 2009), use of PNAD would avoid comparability issues if 2000 census data were also utilized. In fact, a 1990s decade series of PNAD is also available. However, there have been introduced many significant changes in definitions for certain items, which make data compatibility a complex challenge if used for comparative purposes.

Given the above, we have defined the 2000-2010 period as the time reference and selected information for the closest available date to each of this interval's limits. The same criteria have been adopted for other data sources used in this report. Nevertheless, some indicators may be available for one single year or for a shorter time interval.

Dimension and topic area: choosing adequate indicators and proxies

As we knew in advance, some indicators were easy to find, since they have been often used to express social and economic differences in a population. Usually this type of indicator comes from official censuses or household surveys and sex disaggregation is not a problem. Even if not ready available, micro data cross tabulations are easily obtained.

Since we were looking for gender-sensitive information that could be expressed in quantitative indicators, this required a cautious evaluation of the rationale for selecting that aspect to build a relevant indicator. Some indicators are approximations – proxies – for what was initially targeted.

Among the topic areas included in the framework, there was one that is not applicable to Brazil: Physical Integrity (Inputs, Health Status Dimension). Its main content is female genital mutilation, a cultural practice that is not relevant in the Brazilian population.

Nevertheless, it has been argued that violence against women may result in physical injuries, which may have an effect on physical integrity. Although the research team does agree with this reasoning, we have decided to put together all indicators for violence against women. They are all located in the Social Status Dimension, topic area Prevalence of violence against women.

This decision came from the fact that, in the case of Brazil, all possible indicators we were able to find on violence against women were partial ones. That is to say, none of them fully covered what we would like to measure: prevalence of violence against women. The only prevalence data comes from two small samples surveyed as part of the WHO Multi-country Study on Women's Health and Domestic Violence against Women, which was published in 2005. Since these data are not representative for the country as a whole, we have selected alternative data. It should be kept in mind that: (a) each of them comes from a different source, collected for different purposes; (b) data produced by these different sources are not integrated into an information system, even within the same institutional sphere, for instance,

the police institutions; and (c) all data are dependent upon the initiative of the victims to report a violent event and/or to look for help in one way or another. Together they may offer a better comprehension of violence against women in Brazil.

We have also included some additional indicators within the Health Status Dimension. They are indicators for Hepatitis B and C and for syphilis. Those diseases make up part of the framework that was defined for the Millennium Development Goals, and prevention targets for these diseases have been adopted by national health policies around the world. In Brazil as well as in other countries, notification of cases of Hepatitis B and C have been included in programs for the epidemiological control of HIV/AIDS. Specific indicators have been selected based on the official sources of health information at the national and/or regional levels.

Another example of added indicators is access to piped sewerage, in addition to access to electricity (INPUTS, Access to Resources Dimension, ***Indicator I.30***). Among infrastructure resources, sanitation deficiency is much more important in Brazil, given previous emphasis on public investments in electricity coverage. Nevertheless, data show that differences between women and men are irrelevant.

Data unavailability prevented us from building some of the suggested indicators in the GEKS Framework. Among these was information about on-the-job, staff and specialized training, one of the topics suggested within the Inputs Opportunity and Capability Dimension.

Comprehensive data specifically about on-the-job, staff and specialized training could not be found. In fact, there has been an increase in Brazil of many types of on-the-job training at various levels, including MBAs especially formatted upon demand of a specific client, usually a big company. But no systematic records of such initiatives have been found. As suggested in the last version of the GEKS Framework, we have used the US National Center for Education Statistics (NCES) criteria for lifelong learning, which is defined broadly as all types of learning activities in which adults engage and which includes all postsecondary students aged 25-64. The indicator suggested (*Indicator I.37*) is much more general than that originally envisaged. Still, it may exclude students enrolled in non-regular courses.

Among the Outcomes dimensions, GEKS Framework puts some emphasis on women's participation in learning institutions at the very local level. Village-level data for Brazil was very hard to find. No adequate information on women as users or as managers of learning-related centers was available. The only meaningful, but limited, information we could find was on women directors of municipal public libraries for 2009.

A word has to be said about sex ratios. This point deserves further clarification and normalization. As already known, sex ratio is a general measure of the relative importance of sex for other characteristics in a population. According to its definition, the men value is used for the numerator and the women value for the denominator. Sex ratio at birth is its more used version. Given the tendency for male births to exceed female ones, the ratio usually exceeds 1. To interpret the result is an easy thing. Sex ratios are also used for expressing characteristics of the age-sex structure of the population and other characteristics for which sex differences are relevant.

Original indications in the GEKS Framework suggested an inversion of this normalized definition of sex ratio, in which female values would be at the numerator and male values at the denominator. Since there has been no formalized redefinition yet, an ambiguity will be found in this report as to the selected indicators: some ratios are calculated according to the

normalized definition of sex ratio (M/W) and other according to the initially suggested formula (W/M).

Data disaggregation-aggregation

A comparative approach to gender and STI indicators as well as country differences on the availability of information would recommend a selection of indicators with a more general or even superficial character. That is the reason why we have not included among the selected indicators some which, for being too specific, would make country comparisons difficult. This is the case of career structure in the public sector. In the case of Brazil, although women have access to employment at the federal state bureaucracy, top positions are mostly dependent on political indications, and men are overrepresented in them. Women tend to occupy lower hierarchical posts, which are filled on a competitive basis.

However, when approaching certain dimensions, general indicators may have a poor performance in their ability to reveal exactly the inequalities we are looking for. For that reason disaggregation variables, which could have a more general relevance for all countries included in the project, were maintained. One example is skin color, a characteristic that defines race/ethnicity in Brazilian data sources. This disaggregation variable was used in some indicators for the Economic Status Dimension (Inputs).

Since some of the indicators were not ready to use in an already available data base – cases in which possible proxies of an underlying dimension have been suggested - we should expect a certain degree of unevenness among the indicators selected to this point of our country assessment for Brazil.

Sex disaggregation is obviously fundamental.

Overall, there was not much difficulty in finding sex-disaggregated data for traditional indicators. There were some exceptions, however. In the Health Dimension, sex disaggregation for malaria incidence is available only for the Amazon region, the one where the disease has an endemic character.

For the Inputs dimension Access to Resources, sex disaggregation is not available for: Women's access to credit, loans, and venture capital and Use by women of railroads and other transportation infrastructure.

For the Outcomes Women in S&T and Innovation Systems Dimension, sex disaggregation is not available for Rates and trends of publication. In this case, possible proxies for a Brazilian indicator on that matter have been suggested. Those proxies have been built on the basis of information on grants provided by the Brazilian National Council for Scientific and Technological Development (CNPq) to highly productive researchers on a competitive basis.

COMMENTS ON SELECTED INDICATORS AND TRENDS

Knowledge society inputs: women's potential for participation

Health

Brazil is no exception to the tendency of women's Life Expectancy at Birth to exceed men's. The differences between the two are quite similar for 2003 (eight years) and 2007 (seven years). Healthy Life Expectancy at Birth (HALE) is smaller for both women and men. It is noticeable that in the case of HALE, there has been an important increase in the proportion of years that both women and men expect to live in good health.

Nevertheless, men exceed women in terms of the proportion of healthy survival years. Although it is true that improvements have benefitted both, the differences in terms of the proportion of years living in healthy conditions in the total years expected to live favors men. In 2003, the value of female HALE was 81.6% of the women's Life Expectancy at Birth, reaching 85.7% in 2007. In case of men, HALE in 2003 was already 83.8% of the total years expected to live, reaching 88.6% in 2007. (***Indicator I.1***)

The prevalence and incidence of relevant diseases shows, however, that gender makes a difference in the opposite direction. Indicators on the prevalence and incidence of HIV/AIDS reveal that Brazilian men are more vulnerable to it than Brazilian women (***Indicator I.2***). Prevalence and incidence among adults aged 15 and over among men is approximately two times higher than among women.

A similar observation can be made on malaria (***Indicator I.3***). Brazilian health authorities monitor malaria using a different indicator than that usually found in multilateral organization databases such as that of the World Health Organization. The measure used in Brazil is the Annual Parasite Index (IPA), which is defined as the number of positive tests for malaria per thousand people in a given geographic area in the current year. Such definition may involve double counting in case of individuals who undergo more than one test in a given period.

The malaria IPA is much higher for men than for women in the Amazon, the region where the disease is endemic, and this area is the only one for which sex disaggregated data have been found (for 2003 and 2008). Men are more exposed than women to the mosquito that carries the parasite for malaria, due to more frequent and intense contact with the forest. Data suggest that the incidence of malaria decreased in the 2000 decade.

Indicators for tuberculosis (***Indicator I.4***) and for Hepatitis B and C (***Indicator I.5***) also favor women. Between 1999 and 2009, female incidence decreased more than that of males. It is important to note that the incidence of tuberculosis does not follow the upward trend of HIV/AIDS incidence for the same period. Considered as an opportunistic disease associated with HIV/AIDS, it might be that only part of the new cases were due to this association.

Other health indicators suggested by the Brazilian team have been included in this report.

Indicator I.5 refers to Hepatitis B and C. Data show that female incidence rates have increased in the period though they victimize relatively more men than women. The gender gap narrowed considerably between 1999 and 2009. In the case of Hepatitis B, in 2009 female incidence represented 85.9% of male incidence, while it used to be only 57.4 % ten years before. For Hepatitis C, female incidence in 2009 represented 69.1% of male incidence, much higher than the 52.2% in 1999. Incidence rates for women more than doubled for those

diseases in this ten-year period, which means that the disease is spreading more rapidly among women than among men.

The last disease considered in this report is syphilis (***Indicator I.6***). This disease is one of the main targets of pre-natal care in Brazil. Despite that, the indicator shows an increase in the incidence of both congenital syphilis (for the early years of the decade) and of syphilis in pregnancies (for the later years of the period). Apparently vertical contamination has stabilized in the second part of the decade, although syphilis in pregnancy has increased. This may be due to more efficient pre-natal surveillance and care.

Social Status

Violence against women is a matter of great concern in Brazil. There have been changes in legislation recently resulting in harder punishment for acts of violence. Also, popular attention and interest in this subject has risen, which in part explains the increase of cases of violence against women reported through an existing special national call service. However, indicators available may give only a partial picture of what is going on. Data from the Women's Help Call Center confirmed something we already knew: the majority of acts of violence against women are perpetrated by their partners (***Indicator I.10***). Threats and physical injuries are the most frequent type of violence recorded by the special branch of the police for assistance to women suffering violence (***Indicator I.11***). This kind of police service was introduced in the State of São Paulo in the early 1980's and later became a generalized policy in large Brazilian urban centers.

Besides reported violence data, two other indicators on this subject have been added. ***Indicator I.12*** contains information on hospital admissions due to aggression. Although female and male figures for each type of aggression are different, the pattern is very similar: aggression by a cutting, penetrating or blunting instrument is the leading type, followed by shooting and physical force or abuse. The use of a cutting, penetrating or blunting instrument is the only type for which there was an increase between 1999 and 2007.

Indicator I.13 presents mortality data due to aggression. Although figures confirm that aggression against women by a cutting, penetrating or blunting instrument has increased in the last decade, shooting frequently ends up in death.

Time use and workload indicators are very interesting. Overall, the average workload remained stable over the decade. Nevertheless, it seems that female workloads relative to male workloads has gone upward: in 2001 women used to work about 80.8% of male workload, while in 2009 this proportion reached 83.4% of average male working time (***Indicator I.14***). Interesting enough, average hours dedicated to household tasks have decreased for women, among both those economically active and non-economically active. Black women show slightly higher working hours average at home than non-black women, though averages have been reduced for both groups (***Indicator I.15***). ***Indicator I.16*** confirms this trend. Domestic work seems to have been reduced for all categories of workload outside the home. Although it is true that the length of the working journey in the market is associated, on average, with how much time women devote to domestic tasks, no evidence could be found that this decrease was due to any augmented female workload in the labor market.

Economic Status

Brazil has experienced fair economic stability in the 2001-2009 period, due in part to inflation control. Brazilian women have maintained the tendency to be economically active, with some changes due mainly to the opening of new work posts in the industrial and service sectors. Female educational attainment helped women to benefit from new job opportunities. In this scenario, some changes did occur, though no dramatic improvement in women's condition could be observed.

Between 2001 and 2009 women's participation in the labor force crossed the 50% mark, reaching almost 53% of the female population aged 10 or over in 2009. The male participation rate remained stable at about 72% (***Indicator I.17***).

Obviously, women make up a large minority in the labor market, with a share of 42% of the labor force in 2001 and 44% in 2009. This small increase was accompanied by a similar growth in women's share of the employed population: 40.7% of the employed population was women in 2001, a share that increased to 42.7% in 2009 (***Indicator I.18***).

Female labor in the market clearly means employment in the service sector, whose importance remained stable in the decade (***Indicator I.19***). The share of women in different economic sectors shows that female participation in services has increased relative to men's. It also shows that women are making their way into industry, representing 25.4% of the population in that sector of economic activity in 2009 (***Indicator I.20***). Education plays a role in the possibilities for female employment outside agriculture.

Formal employment grew in Brazil between 2001 and 2009, benefitting both women and men (***Indicator I.22***). However, women continue to be overrepresented as domestic workers, a segment where informal work relationships are the norm (***Indicator I.23***). We could expect that the opening of new posts in the formal labor market would affect various forms of informal labor. ***Indicator I.22*** shows that this is apparently true for self-employed male workers and men working for their own consumption. Both have gone down in the period while formal employees have moved up. But women did not change their position as much as men did. For example, similar proportions of female workers as informal employees and as self-employed workers are found in 2001 and in 2009, while men's proportions have been reduced.

Indicator I.21 referring to the ratio of female-to-male earned income shows some improvement in the decade, however. In the overall, there was an increase from 63.2% to 67%, which means that the gap is narrowing. For workers with a 40-44 hour workweek, women's income reached 85.2% of men's, contrasting to 78.8% in 2001. Despite that, equality is a long way ahead. Data show that women's income is still a fraction of men's no matter the years of schooling they have. Tertiary education - as revealed by those with 12 years or more of schooling – may make a difference, since five percentage points in the share have been gained by women relative to men at this level of education.

Indicator I.24 offers the possibility to compare the profiles of women and men in the two extreme quintiles of per capita income. There have been clearly changes especially in the composition of the poorest quintile. Some of these are a result of an educational upgrade of Brazilian population as a whole. As a consequence, effects of educational changes can be also seen in the richest quintile of per capita income. In fact, women benefited more than men from this process in the last decades.

Comparing 2001 and 2009, the education profile of the Brazilian population stands out. Educational upgrade in the poorest quintile has meant that a not-negligible part has attained secondary education, especially women (19.2% in 2009 and 7.6% in 2001). In the richest quintile, in addition to a decrease in less educated women, there was important growth of the proportion of those who attained tertiary education (to 40.2% in 2009 from 29.2% in 2001).

Indicators under the Opportunity and Capability dimension may better assess women's position in education. ***Indicators I.35***, ***I.36***, and ***I.37*** show that Brazilian women have taken up opportunities made possible by a growing educational system. Sex does not make any difference in literacy rates, and primary education enrollment is almost the same for men and women. Women surpass men in both secondary and tertiary education enrollment. Figures for enrollment in undergraduate and graduate courses (population aged 25-64) also reaffirm the idea that Brazilian women are making their way towards creating new opportunities by means of educational betterment.

Another important characteristic of women in the poorest quintile is their vulnerability to unemployment. Although the majority of the economically active women were employed both in 2001 and in 2002, proportions of non-employed women were larger than men's at both dates. Despite the increase in job opportunities in this decade, unemployment has grown among the poorest women, reaching almost ¼ of the economically active poorest women in 2009.

Last but not the least relevant characteristic is family composition. The majority of women in the poorest quintile live alone with children. This means that they may be the only adult and the only pay check holder in the family. Nevertheless, the proportion of women alone with children went down in the decade, though they continue to be a greater part in this income group.

Access to Resources

At first, a general comment on women's civil rights in Brazil should be made (***Indicator I.25***). Brazilian legislation does not discriminate against women as to access to owning land or any other property. Also, no legislation impairs women's possibilities of getting banking loans. There might be especial norms to comply with depending on the property regime chosen by bride and groom at the occasion of a civil marriage. Those norms have to do with the access to each other's property, need for the partner's agreement when selling a common property, etc. But these norms apply to both women and men.

Also, although Brazilian culture values a male newborn – a macho – a girl is as welcomed as a boy. Inheritance laws make no distinction between sons and daughters, and no son preference is noted or affects sex ratio at birth. The Brazilian republican legal system is intrinsically universalistic.

One thing is relevant to be highlighted. Considering available indicators, there is no big difference between women and men as far as access to resources is concerned. The observed growth of access to modern technologies such as Internet and cell phones between 2005 and 2009 - the only dates for which data are available – benefits both sexes, though a small difference favoring men can be noted (***Indicator I.27*** and ***I.28***).

With reference to access to infrastructure resources such as electricity (***Indicator I.29***) and piped sewerage (***Indicator I.30***), similar proportions of women and men have access to them. What discriminates access is clearly housing conditions. In both indicators, women and men

living in non-durable dwellings have significantly less access to these infrastructure betterments. But if sex differences do exist, they affect men negatively. See indicators ***I.29*** and ***I.30*** for detailed variable definitions.

Women's Agency

A somewhat contradictory picture can be drawn from data about women occupying power positions. The election of a woman president might mean that Brazilian society was ready for accepting a woman in power. It is true – as ***Indicator I.32*** shows - that the proportion of female ministries in Dilma Rousseff's presidency has outreached any previous experience, although women are still a minority among heads of ministries.

But, looking at ***Indicator I.31***, it becomes clear that political power and influence are men's attributes. This is true at all legislative levels, from the Senate to the municipal chambers, although there has been some change in figures. The number of women in the Senate doubled between 2000 and 2010; there has been an increase in the proportion of women in the Federal Chamber and at the municipal legislative level. But such figures are of a humble process so far. Advances there are, but still modest ones.

This picture does not allow us to conclude that women are not active political actors, however. ***Indicator I.33*** brings in sight what appears to be a relevant aspect of women's activities in Brazilian society. According to available information for 2003 and 2010, women occupy more than 50% of senior positions in political parties. The same phenomenon happens with NGOs and community-based associations' leaders, though in both cases the proportions seem to have been reduced in the period. 2003 and 2010 figures for senior positions in employers, workers and other socio-economic associations and for leadership of traditional population associations deserve a comment. Differences – with a reduction of female participation - appear to be too sharp to be convincing. It might be that figures were affected by changes in the weight of informal employment in those kinds of associations, since data for Indicator I.33 came from a reliable official source on formal employment in all areas of activities. No additional information could be found to be able to better evaluate them.

A different aspect was included in the Women's Agency dimension: contraceptive use. ***Indicator I.34*** covers a 10-year period, between 1996 and 2006. On that matter, Brazil has arrived at the year 2006 with almost 70% of women aged 15-49 using some sort of protection to prevent a pregnancy, a 25% increase in a decade, since in 1996 a little more than 50% were using contraception. Besides the expansion of access to methods – a target included in Brazilian women's health policies – there have been important changes in the types of methods in use. Female sterilization has greatly decreased (39%), a very much hoped-for turn in contraceptive preferences. The number of women whose partners were using condoms has increased more than three times, a shift partially explained by the growing concern with HIV/AIDS. Although a minor alternative, male sterilization has more than doubled between 1996 and 2006.

Knowledge society outcomes: indicators of women's participation in the knowledge society

Women in Knowledge Society Decision-Making

There have been significant changes in women's share in decision-making positions for the period 2000-2010. Although women continue to be a minority in leadership political posts, ***Indicator O.1*** shows that the proportion of women as state governors more than tripled in 2010 as compared to 2000. An increase is also noted for mayors, although not that large. ***Indicator O.2*** also shows a changing picture, as already mentioned. Changes are quite small, however. In fact, ***Indicator O.2*** is exactly the same as ***Indicator I.31***, since some superposition has remained in the framework guidelines.

Indicator O.4 gives additional information on women in decision-making positions. It refers to women as ministers in the federal cabinet, considering each presidential term from 1995 to 2011. ***Indicator O.4*** is exactly the same as ***Indicator I.32***, due to superposition in the framework guidelines. As already noted, the election of a woman president in Brazil may explain the impressive increase of women ministers. Changes may turn into a trend, but this remains to be seen.

Indicator O.5 was added, although information is limited to 2010. The reason is that for that year it was possible to take into account headship of special secretariats with the status of ministries. It is possible to note than when those positions are taken into account, the share of women increases. However, sector areas for which a special secretariat is assigned – instead of a ministry - are considered to have a lower political prestige as compared to the others.

Indicator O.5 also suggests that obstacles to women in power may be somewhat reduced at lower levels of the political organization, as already noted. Proportions of women as state secretaries and as secretaries of state capital cities are considerably higher for the year 2010 as compared to women's share as ministers.

Indicator O.6 adds information on other relevant and prestigious niches in Brazilian public administration — the legal profession and diplomacy. Both are special careers, with specific structures and rules. Access and progression follow universal principles, which may explain why differences between women and men are not as high as for other prestigious posts, which very much depend on political indications.

Turning to the private sector, ***Indicator O.7*** offers interesting information on the changes underway. Shares of women in decision-making positions in businesses have been outstanding during the first decade of the 21st century. It is clear that in the private sector proportions of women tend also to be higher as we go down in the decision-making hierarchy. At the bottom, women occupy more than 50% of positions in 2008/2009; at the very top – the CEO posts – women's share reaches 1/5 of the available positions only. Nevertheless, for female CEOs there was a 62% increase in the period, while for the bottom position – coordinators – the increase was only 40%. Women in Brazil seem to be increasingly able to compete with men for better positions especially in the business realm.

Other employment indicators have been also considered as suggested in the framework. The main Brazilian labor market data source – the National Household Survey (PNADs) series –

provides information for all the economically active population, no matter whether formally or informally employed. But these data do not allow identification of exactly which occupations could be taken as being associated with the KS area. In fact, it was difficult to know whether the performed activity would be of a technical or professional character or not. To circumvent the unavailability of such specific details, a second data source was used. The alternative source - which did allow discriminating possible KS activities - included employment in the formal market only. As a consequence, ***Indicator O.8*** should be taken as an approximation of some of the targeted aspects in the framework.

Indicator O.8 gives the shares of women in KS, non-agricultural and agricultural occupations for 2003 and for 2010. Indications are that no change has apparently occurred during this time interval. As a matter of fact, in 2003 women had already surpassed men in KS occupations, with around 56% of the positions of this type in the formal labor market. I should admit that this result is surprising, although it is consistent with figures on women in tertiary education (***Indicators O.13***; ***O.14***; and ***O.15***). Also, data on women s information and technology workers (***Indicator O.12***) and women employed in science and technology occupations (***Indicator O.16***) seem to suggest that women are silently forcing their way into fields, professions, or activities where the previous participation was limited.

Indicators O.9 and ***O.10*** offer a more general picture of female participation in the labor market. By looking at the shares of women in different economics activities (***Indicator O.9***), it is clear that, on the one hand, there are some occupational niches which are characteristically female – service and social areas - on the other hand, women have increased their participation in the transformation industry, transport and communication, and in the public administration. ***Indicator O.10*** gives an idea of the status of women employed in the non-agriculture sector. During this last decade opportunities for women in the informal market seem to have outreached formal employment increase. Also, the number of female employers as well as self-employed women has grown between 2001 and 2009. Those indications suggest an increasing diversification of working opportunities for women in Brazilian society.

Indicator O.11 offers an idea of the extent of the impact of technological changes on the Brazilian urban population. Changes in access to computer skills are noteworthy, both for women and for men. Rates of computer use are high (59% of the urban population aged 10 and over in 2010, compared to 41% in 2005). Men and women have experienced similar increases in skills, but for more complex skills, women still lag behind. Nevertheless, the five-year comparison and the impressive differences in such a short period of time, for both sexes, suggest that forces of change are already set in motion. If this supposition proves to be correct, men and women will enlarge their command over computing in the coming years.

The positive picture deriving from some indicators does not carry over so clearly to others. This is the case with ***Indicator O.12***, which measures women's participation among technology and information workers. Information for this indicator comes from a formal labor market source, which means that it does not give a complete picture of the job market. It shows that, overall, women's share of technology and information workers decreased between 2003 (33%) and 2010 (28%). Despite that, women keep a leading position in three out of eight professions included in the metric, comprising over 60% of the workers in the categories of biotechnology professional, information professional, and support technician in biotechnology. Other technology and information areas seem to be less attractive to women; categories that had few women included technology and information manager, engineering and technology researcher, and information technology administrator.

Women in S&T and Innovation Systems

This dimension focuses on both tertiary education and on science and technology research professions. Several indicators have been selected.

Indicator O.13 brings information on female participation as undergraduate students by broad education area groups, as defined by the UNESCO's International Standard Classification of Education. Among the eight area categories, in five women comprised a greater share of students in 2009 than men, in exactly the same categories as at the beginning of the decade. Proportions of female students vary from 54% (Social Sciences, Business and Law) to almost 70% (Education). At the opposite end is the area of Engineering, Manufacturing, and Construction, a traditional group of male careers, where women were few. There was no major change in the picture for the period, though some proportions have gone up or down, with minor differences.

Indicator O.14 expands the categories of education fields, following the same UNESCO's International Standard Classification of Education definitions, resulting in a more detailed picture. Among the twenty-two field categories, in twelve women comprised a greater share of students in 2009. In all but two women's share already exceeded men's at the beginning of the decade. Proportions of female students varied from 50% (Law) to almost 90% (Social Services). Law and Business and Administration are the ones for which the equality barrier has been surpassed. Also, in twelve out of the twenty-two field categories, women's share experienced some increase; in seven there was some decrease, among which were some of the traditional female careers such as Teacher Training and Education Science, Humanities, and Social Services. Women did not lose their superiority in those careers, however. They continue to be characteristically female business.

Graduate education data give a complementary view to that obtained from undergraduate careers. ***Indicator O.15***, however, reinforces what have already been signaled: women's professional training at tertiary education level is geared towards some fields and not to all fields available. Among the nine areas in which Ph. D degrees were granted in 2000 and in 2008, four are predominantly female: Biological Sciences, Health Sciences, Humanities, and Linguistic/Language/Arts. Only in Health Sciences did women outreach men in the time interval covered by the indicator, having experienced a 17% increase in the period. Among the areas in which women showed increasing participation, only in three of them were the rates of increase significant: Agricultural Sciences, with a 25% increase; Multidisciplinary area, with a 48% growth; and Engineering, with a 17% gain. The latter figure is particularly striking, as it stands out in comparison with many other countries of the world.

Indicator O.16 gives the figures for women employed in science and technology occupations. Overall women's shares fluctuate around 39% of the positions over the decade. Nevertheless, women have experienced some growth in ten out of the 18 specific fields included. The picture is consistent with observations already made above: women outreach men in some specific fields – i.e. biological and health sciences research, humanities and social sciences research, professors of biological, health and education sciences, of language and literature, and of arts – and show small increases in fields still dominated by men.

Indicator O.17 brings interesting information on the on-going process. It shows the distribution of researchers by sex and leadership condition, with data from the Brazilian Research Groups Directory, officially maintained by the National Council for Scientific and Technological Development (CNPq). While it is clear that research group leadership is gendered, women have ascended increasingly to this position during the decade, from a proportion of 39% in 2000 to 45% in 2010. Besides that, women are already a majority in

research activities as non-leaders, which means that chances are that they will move fast to leadership positions. In 2010 women were almost 50% of research professionals included in the Brazilian Research Groups Directory. It should be noted that research groups included in this official directory are probably those that are in one way or another dependent upon governmental grants. Certification by the CNPq functions as a credential in applications for research funding at official agencies.

Indicator 18-A was calculated to show the progression of this equality-growing process along time. It shows the sex ratio – as demographically defined - of Brazilian researchers by leadership condition, from 1995 to 2010. It documents the growing participation of women in the research profession as a whole and, specifically, their ascension to leadership in research. In 2010 there were 122 men for each 100 women research leaders, while in 1995 men almost doubled the number of women (199 men for each 100 women). ***Indicator O.18-B*** displays this trend in a graph.

Indicators O.19, ***O.20-A***, and ***O.20-B*** are proxies for evaluating productivity in research. As explained in detail under these indicators, they are based on a specific type of grant to which Brazilian researchers may apply, attributed by a major official agency on a competitive basis, upon recommendations of a peer group.

Indicator 19 gives women's share of research productivity scholarship grantees in 2001 and 2010, according to the scholarship level. It is clear that there was some improvement for women, with a small increase (less than 10%) from 32% in 2001 to almost 35% in 2010. Variations in numbers benefit women though at a very small degree.

To be able to better evaluate gender differences, sex ratios have been calculated for the available period, from 2001 to 2010. Figures are displayed in ***Indicator 20-A***, and a graph (***Indicator 20-B***) illustrates the trend in the decade. They show that men dominate the stage. This is dramatically true at higher-level grants. Researchers 1A are more than three times male than female. An uneven sex attribution of research productivity scholarships prevails down to the lowest level of the A category. Sex ratios for Researchers 1B, 1C, and 1D stay around 2, which mean that men outnumber women 2 to 1 in such positions. A slightly different pattern appears at the entrance category, that of Researchers 2. Here sex ratios are kept below 2, fluctuating around 1.7. Overall, records show that if there was some change in the decade, it was unremarkable.

Some questions cannot be avoided. Are women researchers in Brazil really less productive than men? Are there more obstacles for recognizing women's value in the academic/scientific *milieu*? Does generation bias contribute to a slow change in what is conceived a power position in the scientific or academic community? Generation bias in this context refers to the fact that the rotation of grantees seems to be low, for many reasons. Availability of new grants is also a problem. The number of productivity scholarships has increased 69% in 10 years as against an increase in the accredited professional research population of 164%. There is in fact a possibility that an increase in the number of women with competitive profiles has not been accompanied by a similar increase of such grants opportunities. Data in this report do not allow any definite conclusion. Nevertheless, they do point to questions that remain to be answered.

Outcome indicators of women's participation in the knowledge society also include information on gender trends in brain drain in highly skilled fields. The rationale for exploring sex differences in brain drain is the idea that in a more sexist society, more educated men stay because they do not face the same barriers to career advancement as women do. The only harmonized data available were those of immigrant stocks in OECD countries, classified by

school attainment. Skilled migrants have been defined as foreign-born population aged 25 and over with tertiary education living in those countries. ***Indicator O.21*** gives estimates of Brazilian skilled migrants residing in OECD countries by sex and corresponding migration rates. In the Brazilian case, although skilled migration rate has not been high - 1.3 per 100.000 skilled population at OECD countries in 1990; 2.0 in 2000; and 2.4 in 2010 - women outnumber men as skilled migrants in those countries between 1990 and 2010. It is important to note that the percentage of women among skilled migrants has increased over the last 20 years, especially during the last decade of the 20th Century.

Another aspect of the relative improvement in women conditions is in entrepreneurship. The Global Entrepreneurship Monitor (GEM) has compiled entrepreneurship measures by gender for Brazil for 2001 and 2010. ***Indicator O.23*** compares the sex distribution of entrepreneurs in 2001 and 2010. Sex composition equalized in the decade, reaching a proportion of 49.3% women as against 50.7% men in 2010. There was some growth in rates of entrepreneurship for both sexes in the period. Rates of entrepreneurship are measured as the proportion of each category of entrepreneurs over population aged 18-64. What is noticeable in this respect is that women have not been excluded from what seems to be an emerging trend in the population aged 18-64 (***Indicator O.22***).

Indicators selected for this country assessment are not always consistent with each other. But in the overall, the picture they convey is of a changing society in which no severe obstacle apparently prevents improvements in gender equality. But, at the same time, the image is of a slowly changing process underway, especially in some fields that seem to vigorously resist more than others, such as political power.

SELECTED INDICATORS
KNOWLEDGE SOCIETY INPUTS: women's potential for participation
DIMENSION 1: HEALTH STATUS

Topic area: Female healthy life expectancy

***Indicator I.1* - Ratio: female healthy life expectancy at birth over male value (HALE)**

Brazil, 2003 and 2007: Life expectancy at birth by sex (years); Healthy life expectancy at birth (HALE) by sex (years); Ratio female over male HALE

	2003			2007		
	E_O	Healthy life expectancy at birth	W/M	E_O	Healthy life expectancy at birth	W/M
Female	76	62	1.09	77	66	1.06
Male	68	57		70	62	

Sources: Data for 2002 - WHO. World Health Report 2003 http://www.who.int/whr/2003/en/Annex4-en.pdf; data for 2007 - WHO. World Health Statistics 2010 < http://www.who.int/whosis/whostat/EN_WHS10_Full.pdf >.

Notes on information/sources:

Healthy life expectancy at birth - Average number of years that a person can expect to live in full health by taking into account years lived in less than full health due to disease and/or injury.

Topic area: Prevalence rates of malaria, tuberculosis and HIV/AIDS (W/M)

***Indicator I.2* - Prevalence of HIV/AIDS in the total population and in the 15 + age groups by sex. Incidence of HIV/AIDS in the total population and in the 15 + age groups by sex. Estimated female population living with HIV/AIDS.**

Brazil, 1999 and 2009: Prevalence and Incidence of HIV/AIDS by sex and year

	1999		2009	
	Male	Female	Male	Female
New cases reported	17,978	10,031	23,467	15,069
All cases reported	161,952	59,963	377,604	201,774
Prevalence (%)	0.20	0.07	0.40	0.21
Prevalence among adults aged 15 and over (%)	0.29	0.10	0.53	0.26
Incidence (new cases per 100,000 population)	22.24	12.07	24.95	15.47

	1999		2009	
	Male	Female	Male	Female
Incidence among adults aged 15 and over (new cases per 100,000)	32.00	16.46	33.22	19.85
Estimated female population aged 15 and over living with AIDS	-	140,000 (min) 210,000 (max)	-	180,000 (min) 330,000 (max)

Sources: Datasets, DSTs-AIDS. http://www2.aids.gov.br/cgi/deftohtm.exe?tabnet/br.def
For Estimate of female population aged 15 and over living with AIDS: UNAIDS, Global Report 2011, http://www.unaids.org/documents/20101123_GlobalReport_Annexes1_em.pdf

Notes on information/sources:

HIV/AIDS prevalence in the total population is the percentage of the population living with HIV/AIDS.

HIV/AIDS incidence is the number of new HIV/AIDS cases reported in the population during a certain time period. Changes in HIV incidence statistics can give an idea of whether prevention strategies are being successful in reducing the number of new infections.

Information about the estimated male population living with AIDS could not be found.

Indicator I.3 - Incidence of Malaria

Brazil, 1999, 2003 and 2008
Incidence of Malaria – Annual Parasite Index (IPA)

Year	Brazil	Amazon Region	Male	Female
1999	3.9	31.9		
2003	2.3	18.0	23.1	12.7.
2008	1.6	12.7	15.3	98

Sources: Data for Brazil and Amazon Region: DATASUS, RIPSA, IDB - <http://tabnet.datasus.gov.br/cgi/idb2009/matriz.htm?saude=http%3A%2F%2Ftabnet.datasus.gov.br%2Fcgi%2Fidb2009%2Fmatriz.htm&botaook=OK&obj=http%3A%2F%2Ftabnet.datasus.gov.br%2Fcgi%2Fidb2009%2Fmatriz.htm>
Incidence by sex - Brasil, MS/SVS/SUS - Situação da Malária no Brasil, 2009. Cases reported by sex in Amazon Region. <http://portal2.saude.gov.br/portal/arquivos/pdf/situacao_da_malaria_site_svs_28_12.pdf>

Notes on information/sources:

Data for prevalence of malaria are not available.

Differing from UN and WHO malaria indicators, in Brazil the incidence of malaria is measured by the **Annual Parasitic Index**, defined by the number of positive tests for malaria per thousand inhabitants in a given geographical area in the current year. This ratio estimates the risk of malaria in a given population at a given time interval. Note that the number of

positive tests does not mean the number of cases of malaria, and it may involve double counting when the same patient is subjected to more than one test.

The Malaria Annual Parasitic Index for Brazil as a whole is not available with sex disaggregation.

***Indicator I.4* - Prevalence of Tuberculosis**

Brazil, 1999 and 2009: Prevalence and Incidence of Tuberculosis by sex

	1999		2009	
	Male	**Female**	**Male**	**Female**
Cases reported at the year	51,791	32,546	59,074	29,663
All cases reported	491,745	332,985	1,072,428	639,638
Prevalence (%)	0.61	0.40	1.14	0.66
Incidence (100,000 population per year.)	64.1	39.2	62.8	30.4

Source: Ministry of Heath, Notifiable Diseases Information System (SINAN)
http://dtr2004.saude.gov.br/sinanweb/tabnet/dh?sinannet/tuberculose/bases/tubercbrnet.def

Notes on information/sources:

Prevalence of Tuberculosis is the number of cases of TB (all forms) in a population at a given point in time.

Incidence of Tuberculosis is the number of new cases of tuberculosis in the population during a certain time period by 100,000 inhabitants. It estimates the risk of an individual for developing TB in a given population at a specified time interval.

Additional health indicators suggested:

***Indicator I.5* – Incidence of Hepatitis B and C**

Brazil, 2000 and 2009: Incidence of Hepatitis B and C (per 100,000)

Incidence	2000		2009	
	Male	**Female**	**Male**	**Female**
Hepatitis B	5.4	3.1	8.5	7.3
New cases	4,515	2,652	7,988	7,068
Hepatitis C	4.6	2.4	9.4	6.5
New cases	3,867	2,081	8,802	6,371

Source: Ministry of Heath, Notifiable Diseases Information System (SINAN). Special cross tabulation.

Notes on information/sources:

Data on prevalence of Hepatitis are not available.

Incidence of Hepatitis B or C is defined as the number of cases of the disease in a population during a certain time period per 100,000 inhabitants. It estimates the risk of an individual for developing the disease in a given population at a specified time interval.

***Indicator I.6* – Incidence of Syphilis**

Brazil, 1999, 2005 and 2008:
Incidence of congenital syphilis and syphilis in pregnancy

	1999	2005	2008
Congenital syphilis			
Number of cases	3,198	5,830	5,506
Incidence (per 1,000 newborn)	1.0	1.9	1.9
Syphilis in pregnancy			
Number of cases		1,863	6,955
Incidence (per 1,000 newborn)		0.6	2.4

Source: Brazil, MS, Epidemiological Bulletin 2009.

Notes on information/sources:

Incidence of congenital syphilis in children under one year is the number of new cases of congenital syphilis in children under one year in a particular year over the total newborns at the same year per 1,000.

Incidence of syphilis in pregnant women is the number of detected cases of syphilis in pregnant women in a particular year over the number of newborns at the same year of notification, per 1,000.

Topic area: Physical integrity

Notes on information/sources:

Indicators (1) and (2) suggested in the Framework are not applicable to Brazil. Indicators on physical violence against women are presented in **Dimension 2: Social Status; Topic area: Prevalence of violence against women.**

1) Women aged 15-49 subjected to female genital mutilation
2) Ratio of prevalence of FGM in daughters.
3) Proportion of women experiencing physical violence

DIMENSION 2: SOCIAL STATUS

Topic area: Equity/discrimination in social institutions

***Indicator I.7* - OECD- civil liberties**

Brazil, 1999 and 2009: OECD/GID Civil Liberties

Year	Civil Liberties	
	Freedom of movement	Dress code in public
1999	0	0
2009	0	0

Source: OECD Gender, Institutions and Development (GID) database.
http://stats.oecd.org/Index.aspx?DatasetCode=GID2 .

Notes on information/sources:

Variables and values of civil liberties dimension in OECD / GID database:

Freedom to move freely outside of the house (between 0=none and 1=high).

Obligation to wear a veil in public (between 0=women are not obliged to wear a veil and 1=all women are obliged to wear a veil). This variable is not applicable to Brazil, a laic state.

This indicator was proposed by OECD. The latter point in time (2009) was obtained directly from the database website. The same procedure was used for data corresponding to 1999. In Brazil there is no legal norm that restricts mobility or any type of dress code for women. For the period mentioned above, the 1988 Constitution and the Civil Code of 2002 were already in force. They ensure complete equality between men and women in public and private life.

***Indicator I.8* - Composite gender equity indices:**

1) UNDP Gender Empowerment Measure (GEM),

2) UNDP Gender-related Development Index (GDI)

3) Social Watch Gender Equity Index.

Brazil, 2004 and 2007:
Composite gender equity indices

Composite index	2004	2007
GEM	0.486	0.490
GDI	0.789	0.798
GEI		73

Sources: UNPD, Human Development Report 2009.
http://hdr.undp.org/en/reports/global/hdr2009/
SOCIAL WATCH, Gender Equity Index 2007.
http://www.socialwatch.org/node/9358.

Notes on information/sources

Gender-related Development Index (GDI) measures achievement in the same basic capabilities as the HDI, but takes note of inequality in achievement between women and men. The methodology used imposes a penalty for inequality, such that the GDI falls when the achievement levels of both women and men in a country go down or when the disparity between their achievements increases. The greater the gender disparity in basic capabilities, the lower a country's GDI compared with its HDI. The GDI is simply the HDI discounted, or adjusted downwards, for gender inequality. Source: UNDP. Measuring inequality: Gender-related Development Index (GDI) and Gender Empowerment Measure (GEM). http://hdr.undp.org/en/statistics/indices/gdi_gem/.

Gender Empowerment Measure (GEM) is a measure of agency. It evaluates progress in advancing women's standing in political and economic forums. It examines the extent to which women and men are able to actively participate in economic and political life and take part in decision-making. While the GDI focuses on expansion of capabilities, the GEM is concerned with the use of those capabilities to take advantage of the opportunities of life. Source: UNDP. Measuring inequality: Gender-related Development Index (GDI) and Gender Empowerment Measure (GEM). http://hdr.undp.org/en/statistics/indices/gdi_gem/.

The **Social Watch Gender Equity Index (GEI)** is based on information available that can be compared internationally. The index makes it possible to classify countries and rank them in accordance with a selection of gender inequity indicators in three dimensions: education, economic participation and empowerment.

The way the GEI is calculated is a response to the need to reflect all situations that are unfavorable to women. When there is a situation in which women are at a proportional disadvantage with respect to men, the GEI does not reach its maximum value of 100 points. The final value on the index depends on the degree of negative inequity for women prevailing in a given country or region regardless of whether there may also be inequities that are positive for women (that is to say negative for men). Source: Social Watch. Gender Equity Index (GEI) http://www.socialwatch.org/taxonomy/term/527.

Topic area: Sex ratio at birth

Indicator I.9 – Sex ratio at birth

Brazil, 1999 and 2009:
Sex ratio at birth

Year	Ratio
1999	103.4
2009	104.9

Sources: Data for 1999: DATASUS, RIPSA, IDB - http://tabnet.datasus.gov.br Data for 2009: IBGE, Vital Statistics System. Available at: http://www.sidra.ibge.gov.br/bda/tabela/listabl.asp?z=p&o=9&i=P&c=2609

Notes on information/sources

Sex Ratio is the number of men per 100 women in the population in a given year. It expresses the quantitative relationship between the sexes. If equal to 100, the number of men and women are equal; above 100 men are predominant; if below there is a predominance of women.

Sex ratio at birth is the ratio between the number of male children born and female. Source: RIPSA, IDB, Technical Notes. http://www.ripsa.org.br/fichasIDB/record.php?node=a.2&lang=pt&version=ed4.

Topic area: Prevalence of violence against women

***Indicator I.10* - Women Self-reported Violence**

Brazil, 2007 and 2010: Violence against women reported to Women's Help Call Center (Call 180)

	2007	2010
Number of phone calls	124,697	734,416
Violence cases reported	20,050	108,546
Type of violence reported (%)		
Physical	65.9	58.8
Psychological	21.4	25.3
Moral	9.0	11.6
Sexual	2.2	2.1
Economic	0.8	1.7
Deprivation of liberty	0.6	0.4
Trafficking of women	0.1	0.1
Total	**100.0**	**100.0**
Aggressor (%)		
Husband/partner/boyfriend	69.5	72.1
Relatives and close friends	13.0	11.2
Others	17.5	16.7
Total	**100.0**	**100.0**
Frequency of aggression (%)		
Daily	61.0	58.1
Weekly	16.2	17.3
Monthly	5.3	6.0
Once	8.1	10.0
Other	9.4	8.6
Total	**100.0**	**100.0**

Source: State Secretariat on Policies for Women. Women's Help Call Center – Call 180.

Notes on information/sources:

Call 180 is a service provided by the State Secretariat on Policies for Women – a federal administrative instance at the level of a ministry - in order to receive reports of violence, to provide guidance for women on their rights and applicable legislation in force, and acting as a centralized referral service to other administrative units in the area.

Indicator I.11 **– Police Reports on Violence against Women**

Brazil, 2003 and 2007:
Cases reported to the Special Police for Assistance to Women

Police report	2003		2007	
	Reports	%	Reports	%
Threats	149,856	35.9	144,078	29.3
Indecent assault	3,491	0.8	3,901	0.8
Slander	15,358	3.7	9,224	1.9
Damages	4,103	1.0	6,044	1.2
Defamation	10,952	2.6	13,701	2.8
Rape	7,405	1.8	3,779	0.8
Insult	21,462	5.1	31,945	6.5
Physical injuries	130,486	31.3	79,309	16.1
Abuse	8,075	1.9	3,532	0.7
Disturbances	10,766	2.6	11,769	2.4
Harassment	33,617	8.1	35,646	7.3
Others	21,356	5.1	148,481	30.2
Total	**416,927**	**100.0**	**491,407**	**100.0**

Source: Brazil. Millennium Development Goals - Progress Report 2010

Notes on information/sources:

These data come from the Organizational Profile of Special Police for Assistance to Women Survey prepared by IPEA/DISOC, upon the request by the National Secretariat of Public Security.of the Sate Ministry of Justice.

Data are probably partial since violence against women may be and is in fact also reported to regular police stations, even when there is a specialized police unit for assisting women in the surrounding area.

Indicator I.12 - **Hospital admissions motivated by aggression against women**

Brazil, 1999 and 2007: Percentage of Hospital Admissions motivated by aggression by sex of the patient

Types of aggression	Female		Male	
	1999	2007	1999	2007
Use of chemical substances	2.6	1.5	0.9	0.7
Hanging / suffocation / strangulation	0.1	0.1	0.1	0.1
By drowning and submersion	0.2	0.0	0.1	0.0
By shooting	16.5	11.9	33.6	27.3
By materials and substances that cause burns	8.7	1.0	2.2	0.7
By a cutting, penetrating or blunt instrument	32.6	47.8	35.0	41.9
Be pushed from high place or moving	3.0	3.0	1.4	1.1
By impact of vehicle	4.5	3.0	2.1	1.6
Use of physical force or abuse	15.5	12.7	14.3	14.6
Sexual Assault	1.3	1.2	0.2	0.2
Neglect and abandonment	0.6	0.7	0.2	0.3
Other forms	14.3	16.9	9.9	11.6
Total	**100.0**	**100.0**	**100.0**	**100.0**
	6,926	**8,088**	**34,249**	**36,127**

Source: Ministry of Health - Hospital Information System of the Unified Health System (SIH / SUS). Special cross tabulation.

Indicator I.13 – **Female deaths by aggression**

Brazil, 1999 and 2009: Deaths by external causes and deaths by aggression in population aged 15 and over, by sex and year

Deaths	1999		2009	
	Female	Male	Female	Male
Number of deaths	348,299	490,095	444,774	593,988
% deaths by external causes in all causes	4.4	18.4	4.7	18.4
% deaths by aggression in external causes	20.5	41.8	18.8	41.7
Type of aggression				
By shooting	50.7	64.0	52.1	73.5
By a cutting, penetrating or blunt	26.4	19.0	33.2	20.1
Other forms	22.9	17.0	14.7	6.5
Total	**100.0**	**100.0**	**100.0**	**100.0**
Number of deaths by aggression	**3,182**	**37,693**	**3,929**	**45,484**

Source: MS / SVS / DASIS - Mortality Information System - SIM. Special cross tabulation.

Topic area: Time use/workload

***Indicator I.14* - Female work time as a % of male**

Brazil, 2001 and 2009: Average hours worked per week by employed population aged 10 years and over by sex and skin color

	2001			2009		
	Non-Black	**Black**	**Total**	**Non-Black**	**Black**	**Total**
Male	45.0	43.6	44.3	42.9	42.0	42.4
Female	36.6	34.9	35.8	36.3	34.4	35.4
Both sexes	41.4	40.2	40.9	40.0	38.9	39.4
% F/M	81.4	79.9	80.8	84.6	82.0	83.4

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.
Note: Non-Black category includes individuals reported as White, Indigenous and Yellow. Black includes individuals reported as Black and Brown.

***Indicator I.15* – Hours dedicated to household tasks per week**

Brazil, 2001 and 2009: Average hours dedicated to household tasks per week by population aged 10 years and over by sex, activity status and skin color

Economic Activity Status	**Male**			**Female**		
	Non- Black	**Black**	**Total**	**Non- Black**	**Black**	**Total**
2001						
Economically Active	10.1	10.9	10.5	24.4	26.4	25.3
Non Economically Active	12.6	12.4	12.5	33.3	32.1	32.7
Total	**10.7**	**11.3**	**11.0**	**28.8**	**29.3**	**29.0**
	15,542,988	**12,668,491**	**28,211,479**	**35,036,939**	**28,674,750**	**63,711,689**
2009						
Economically Active	9.4	10.1	9.7	21.5	23.7	22.6
Non Economically Active	11.4	11.3	11.4	28.4	27.9	28.1
Total	**10.0**	**10.4**	**10.2**	**24.6**	**25.7**	**25.1**
	18,776,089	**19,186,523**	**37,962,612**	**36,749,120**	**36,619,136**	**73,368,256**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation. Note: Non-Black category includes individuals reported as White, Indigenous and Yellow. Black includes individuals reported as Black and Brown.

Indicator I.16 – **Hours dedicated to household tasks by the employed population**

Brazil, 2001 and 2009: Average hours dedicated to household tasks per week by employed population aged 10 years and over by sex, skin color and weekly worked hours

	Male			Female		
	Non-Black	**Black**	**Total**	**Non-Black**	**Black**	**Total**
2001						
Up to 14 hours	10.8	11.2	11.0	34.8	34.4	34.6
15 a 39 hours	10.7	11.2	11.0	26.7	27.7	27.2
40 a 44 hours	9.6	10.4	9.9	19.9	21.3	20.4
45 a 48 hours	9.8	10.7	10.2	20.1	20.3	20.2
49 hours or over	9.1	9.7	9.3	19.3	21.0	20.0
Total	**9.7**	**10.5**	**10.0**	**23.4**	**25.1**	**24.1**
	10,595,592	**8,355,177**	**18,950,769**	**15,712,125**	**12,000,092**	**27,712,217**
2009						
Up to 14 hours	10.7	10.0	10.3	29.9	31.2	30.7
15 a 39 hours	10.1	11.0	10,6	23.9	25.6	24.8
40 a 44 hours	9.2	9.6	9.4	18.0	19.2	18.5
45 a 48 hours	9.2	9.8	9.5	18.8	19.5	19.1
49 hours or over	8.4	9.3	8.8	18.0	19.3	18.6
Total	**9.2**	**9.8**	**9.5**	**20.8**	**22.9**	**21.8**
	12,971,670	**12,957,628**	**25,929,298**	**18,020,490**	**17,040,804**	**35,061,294**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation. Note: Non-Black category includes individuals reported as White, Indigenous and Yellow. Black includes individuals reported as Black and Brown.

DIMENSION 3: ECONOMIC STATUS

Topic area: Women as % of economically active population

Indicator I.17 **- Female labor force participation over male value**

Brazil, 2001 and 2009: Population aged 10 years and over by sex, economic activity status and occupational status

	2001				2009			
	Male	**Female**	**Both sexes**	**F/M**	**Male**	**Female**	**Both sexes**	**F/M**
Economic activity status								
Economically Active	72.8	48.9	60.5	0.67	72.2	52.7	62.1	0.73
Non-Economically Active	27.2	51.1	39.5	1.88	27.8	47.3	37.9	1.70
Total	**100.0**	**100.0**	**100.0**		**100.0**	**100.0**	**100.0**	
	66,300,746	**71,151,279**	**137,452,025**		**77,214,199**	**83224035**	**160,438,234**	
Occupational Status								

Employed	92.5	88.1	90.6	0.95	93.7	88.9	91.6	0.95
Non-employed	7.5	11.9	9.4	1.58	6.3	11.1	8.4	1.78
Total	**100.0**	**100.0**	**100.0**		**100.0**	**100.0**	**100.0**	
	48,294,450	**34,801,906**	**83,096,356**		**55,714,144**	**43,861,808**	**99,575,952**	

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Indicator I.18 – Share of women by economic activity and occupational statuses

Brazil, 2001 and 2009: Share of women aged 10 years and over, by economic activity and occupational statuses

	2001		2009	
	Both sexes N	**Female %**	**Both sexes N**	**Female %**
Economic activity status				
Economically Active	83,096,356	41.9	99,575,952	44.0
Non-Economically Active	54,355,669	66.9	60,862,282	64.7
Total	**137,452,025**	**51.8**	**160,438,234**	**51.9**
Occupational Status				
Employed	75,320,528	40.7	91,208,051	42.7
Non-employed	7,775,828	53.2	8,367,901	58.3
Total	**83,096,356**	**41.9**	**99,575,952**	**44.0**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Indicator I.19 – Employment in economic sectors by sex

Brazil, 2001 and 2009: Proportion of persons aged 10 years and over employed in agriculture, industry and services by sex

	2001			2009		
	Male	**Female**	**Both sexes**	**Male**	**Female**	**Both sexes**
Agriculture	24.1	16.4	21.0	21.6	12.6	17.7
Industry	27.4	10.1	20.3	31.7	14.2	24.2
Services	48.6	73.5	58.7	46.7	73.2	58.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	43,839,944	**30,142,470**	**73,982,414**	**47,663,005**	**36,216,330**	**83,879,335**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Indicator I.20 – Share of women in different economic sectors

Brazil, 2001 and 2009: Share of women aged 10 years and over in agriculture, industry and services

	2001		2009	
	Both sexes	**Female**	**Both sexes**	**Female**
Agriculture	15,506,120	31.9	14,838,092	30.7
Industry	15,042,415	20.2	20,289,154	25.4
Services	43,433,879	51.0	48,752,089	54.4
Total	**73,982,414**	**40.7**	**83,879,335**	**43.2**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Topic area: Earned income ratios (M/W)

Indicator I.21 - Ratio of estimated female-to-male earned income

Brazil, 2001 and 2009: Ratio of estimated female-to-male earned income by weekly work hours and years of schooling

	F/M %	
	2001	**2009**
Weekly work hours		
Up to 14 hours	38.8	51.2
15 a 39 hours	75.8	75.0
40 a 44 hours	78.8	84.2
45 a 48 hours	78.3	76.8
49 hours or over	70.1	72.3
Total	**63.2**	**67.1**
	74,165,504	**89,279,803**
Years of schooling		
Up to 8 years	48.9	52.5
9 a 11 years	56.0	60.3
12 years and over	52.6	57.6
Total	**63.2**	**67.1**
	73,637,271	**88,251,945**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Topic area: Females by category of workers (self-employed, salaried, family workers)

***Indicator I.22* – Women work status as compared to men**

Brazil, 2001 and 2009: Distribution of population aged 10 years and over by status of worker and sex

	2001			2009		
	Male	**Female**	**Both sexes**	**Male**	**Female**	**Both sexes**
Formal employee	32.4	25.1	29.4	39.2	30.1	35.3
Informal employee	21.9	13.2	18.4	19.2	12.8	16.5
Military and statutory civil servants	5.0	8.7	6.5	5.4	9.6	7.2
Formal domestic workers	0.4	4.5	2.0	0.4	4.5	2.2
Informal domestic workers	0.5	13.5	5.8	0.5	12.6	5.7
Self-employed	26.5	16.2	22.3	23.5	16.1	20.3
Employer	5.4	2.4	4.2	5.6	2.7	4.3
Workers in production for own consumption and construction for own use	2.3	6.6	4.0	3.0	5.6	4.1
Unpaid workers	5.7	9.8	7.4	3.2	6.0	4.4
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
	44,654,258	**30,662,849**	**75,317,107**	**52,224,710**	**38,983,341**	**91,208,051**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

***Indicator I.23* - Share of women by status of worker**

Brazil, 2001 and 2009: Share of women aged 10 years and over by the status of worker

	2001		2009	
	Both sexes	**Female**	**Both sexes**	**Female**
Formal employee	22,154,787	34.7	32,212,435	36.4
Informal employee	13,849,551	29.3	15,034,484	33.2
Military and statutory civil servants	4,866,441	54.6	6,570,185	57.0
Formal domestic workers	1,534,594	89.7	1,987,394	88.8
Informal domestic workers	4,349,196	95.1	5,175,246	94.8
Self-employed	16,792,897	29.7	18,526,213	33.9
Employer	3,174,317	23.4	3,950,151	26.4
Workers in production for own consumption and construction for own use	3,027,152	66.5	3,739,679	58.2
Unpaid workers	5,568,172	54.1	4,012,264	58.6
Total	**75,317,107**	**40.7**	**91,208,051**	**42.7**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá.

Topic area: Women in poorest quintile

***Indicator I.24* - Proportion of persons aged 10 years and over by sex, household per capita income quintile, and selected social characteristics**

Brazil, 2001 and 2009: Proportion of persons aged 10 years and over by sex, household per capita income quintile and selected social characteristics

	2001				2009			
	1st quintile		5th quintile		1st quintile		5th quintile	
	Male	Female	Male	Female	Male	Female	Male	Female
Years of schooling								
Up to 8 years	94.2.	92.0	39.3	38.6	84.8	79.3	29.4	29.7
9 a 11 years	5.5	7.6	33.1	32.2	14.0	19.2	34.2	30.1
12 years and over	0.3	0.5	27.6	29.2	1.2	1.5	36.4	40.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Economic activity status								
Economically Active	69.2	41.2	75.2	55.4	64.9	41.2	78.1	59.9
Non-Economically Active	30.8	58.8	24.8	44.6	35.1	58.8	21.9	40.1
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Occupational Status								
Employed	85.3	80.1	96.2	93.6	86.4	75.7	97.2	95.8
Non-employed	14.7	19.9	3.8	6.4	13.6	24.3	2.8	4.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Family Composition (household head)								
Couple without children	5.5	0.6	27.0	4.4	8.9	2.6	30.8	10.9
Couple with children	89.0	7.3	56.5	6.4	83.6	23.0	47.1	16.6
Man/Woman with children	-	78.9	-	44.8	-	61.1	-	29.9
Man/Woman alone or living with others adults	5.5	13.1	16.6	44.5	7.5	13.3	22.1	42.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá.

DIMENSION 4: ACCESS TO RESOURCES

Topic Area: Ownership rights to land, houses and other property. Women's access to credit, loans, venture capital.

***Indicator I.25* – OECD/GID Ownership rights**

Brazil, 1999 and 2009: OECD/GID Ownership rights

Year	Son Preference	Women's access to land	Women's access to bank loans	Women's access to property other than land
1999	0	0	0	0
2009	0	0	0	0

Source: OECD, Gender Institutions and Development (GID) database
http://stats.oecd.org/Index.aspx?DatasetCode=GID2
Note: Values for 1999 using the same criteria for 2009.

Notes on information/sources:

Variables and values of ownership rights dimension in OECD / GID database:

Women's Access to land ownership (between 0=full and 1=impossible)**.**

Women's Access to bank loans (between 0=full and 1=impossible)**.**

Women's rights to own property other than land (between 0=full and 1=no).

This indicator was proposed by OECD. The latter point in time (2009) was obtained directly from the database website. The same procedure was used for data corresponding to 1999. In Brazil there is no legal norm that restricts any kind of ownership rights. For the period mentioned above, the 1988 Constitution and the Civil Code of 2002 were already in force. They ensure complete equality between men and women in public and private life.

Data on access to different kinds of credit and loans by women have not been found.

Topic area: Percent of women using Internet and cell phones

***Indicator I.26* – Percentage of women and of men using Internet**

Brazil, 2005 and 2009: Women and men aged 15 and over who used Internet

Year	% Women	% Men	Sex ratio (M/F)
2005	19.5	21.7	1.11
2009	38.9	40.5	1.04

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. For 2005/2008: http://www.ibge.gov.br/home/estatistica/populacao/acessoaInternet2008/defaulttab_hist.shtm. For 2009 http://www.ibge.gov.br/home/estatistica/populacao/trabalhoerendimento/pnad2009/pnad_sintese_2009.pdf

Indicator I.27 - **Percentage of women and of men using cell phones**

Brazil, 2005 and 2009: Women and men aged 15 and over who used cell phones

Year	% Women	% Men	Sex ratio (M/F)
2005	36.7	41.2	1.11
2009	60.1	62.1	1.03

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. For 2005/2008: http://www.ibge.gov.br/home/estatistica/populacao/acessoaInternet2008/defaulttab_hist.shtm. For 2009 http://www.ibge.gov.br/home/estatistica/populacao/trabalhoerendimento/pnad2009/pnad_sintese_2009.pdf

Notes on information/sources:

The Brazilian National Household Survey (PNAD) included Internet and cell phone use in a special supplement to the 2005 and 2008 rounds. Since 2009 these topics have been definitively incorporated into the questionnaire. For Internet access, the time reference was at least one access by the respondent within 90 days before the interview, using either a desktop computer or a laptop, notebook, palmtop, pocket pc or handheld.

Topic area: Use by women of railroads and other transportation infrastructure.

Indicator I.28-A – **Mobility Index (trips/person/day) by sex in the Metropolitan Region of Rio de Janeiro (Brazil)**

Brazil, 2002/2003: Mobility Index in the Metropolitan Region of Rio de Janeiro (trips/person/day) by sex and transportation mode

Sex	Mobility Index		
	Motorized	Non-motorized	Total
Male	1.3	0.7	**1.9**
Female	1.0	0.7	**1.6**
Total	**1.1**	**0.7**	**1.8**

Source: Urban Transport Master Plan for the Metropolitan Region of Rio de Janeiro 2002/2003. Search results Origin/Destination http://www.setrerj.com.br/dados/pdtu2010.pdf

Indicator I.28-B - **Mobility Index (trips/person/day) by sex in the Metropolitan Region of São Paulo (Brazil)**

Brazil, 1997 and 2007: Mobility Index in the Metropolitan Region of Sao Paulo (trips/person/day) by sex and transportation mode

	1997			2007		
SEX	Motorized	Non-Motorized	Total	Motorized	Non-Motorized	Total
Male	1.4	0.6	**2.0**	1.4	0.6	**2.1**
Female	1.1	0.7	**1.7**	1.2	0.7	**1.9**
TOTAL	**1.2**	**0.7**	**1.9**	**1.3**	**0.7**	**2.0**

Source: Origin/Destination Survey, 2007. Summary of information. Household Survey. December 2008.

Notes on information/sources:

Data on women's access to transportation infrastructure were not found. The only proxies available are data on mobility in the two main metropolitan areas of Brazil, Rio de Janeiro and São Paulo, both in the Southeastern Region.

Data on mobility in the Metropolitan Region of Rio de Janeiro come from the last Origin/Destination survey, conducted in 2002/2003 by the Transportation Secretary as part of the activities for planning urban transportation services in the area. The MRRJ was divided into 485 sectors, and the sample included 34,000 households and 99,310 interviewed individuals. No other data was available on this indicator.

Data for the MRRJ show that men have greater mobility than women, with 1.9 male trips/day and 1.6 female trips/day. Men move more by motorized vehicles while women make less use of motorized vehicles. There is no apparent difference between men and women as to using non-motorized means of transportation.

Data on mobility in the Metropolitan Region of São Paulo come from the last Origin/Destination survey, conducted in 2007. Sampling was stratified by socio-economic level, using domestic consumption of electricity as a proxy for socio-economic status. 30,000 households were selected and questionnaires administered to all residents. All kinds of public (bus, train, Metro) and private (bus, van, taxi, private car, motorcycle, bicycle) forms of transportation, as well as walking were considered. The 2007 report also included comparative data from the similar 1997 survey.

Indicator I.28-B shows a small increase in women's mobility in the Metropolitan Region of São Paulo. Women move by non-motorized means more than men, that is to say, by biking or walking.

Topic Area: Access of women to electricity, including penetration and reliability in rural areas.

***Indicator I.29* - Share of women and men in urban and rural areas with access to electricity, by the type of dwelling materials**

Brazil, 2001 and 2009: Share of women and men in urban and rural areas with access to electricity, by the type of dwelling materials

Type of dwelling materials	2001			2009		
	Population with access	% women with access	% men with access	Population with access	% women with access	% men with access
URBAN AREAS						
Durable	138,820,892	99.4	99.4	158,959,619	99.9	99.9
Semi-durable	2,702,680	91.7	90.9	1,684,003	98.5	98.3
Non-durable	343,122	85.7	81.3	138,285	96.4	95.9
Total	**141,866,694**	**99.3**	**99.1**	**160,781,907**	**99.9**	**99.9**
RURAL AREAS						
Durable	23,453,956	82.1	81.4	25,560,516	96.4	95.7
Semi-durable	2,482,535	52.1	50.3	1,475,543	82.7	81.9
Non-durable	1,249,515	24.9	21.4	572,032	56.0	53.7
Total	**27,186,006**	**76.9**	**75.7**	**27,608,091**	**94.9**	**94.0**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Additional infrastructure indicator suggested:

***Indicator I.30* – Share of women/men in urban and rural areas with access to piped sewerage, by the type of dwelling materials**

Brazil, 2001 and 2009: Share of women/men in urban and rural areas with access to piped sewerage, by the type of dwelling materials

Type of dwelling materials	2001			2009		
	Population with access	% women with access	% men with access	Population with access	% women with access	% men with Access
URBAN AREAS						
Durable	135,110,295	77.4	76.7	157,477,518	80.7	80.1
Semi-durable	1,904,605	41.1	40.5	1,434,192	48.5	46.3
Non-durable	114,434	17.1	13.7	82,531	9.0	12.1
Total	**137,129,334**	**76.9**	**76.2**	**158,994,241**	**80.4**	**79.7**
RURAL AREAS						
Durable	16,698,820	22.3	21.6	21,607,392	31.5	31.1
Semi-durable	538,214	14.3	12.5	588,141	19.6	16.8
Non-durable	107,449	-	-	168,233	2.9	2.2
Total	**17,344,483**	**21.9**	**21.2**	**22,363,766**	**31.0**	**30.5**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Notes on information/sources:

Data for this indicator come from the National Household Surveys (PNADs 2001 and 2009). We decided to add a variable – type of dwelling materials – as a way to identify urban *favelas,* in which housing is usually poor, built with whatever materials are available. Though very typical Brazilian poor urban settlements, *favelas* are not identified as such in these surveys. The variable and its categories were obtained through a combination of two variables: (1) type of wall material (masonry, pressure treated wood, mud, untreated wood, straw and others); and (2) type of roofing material (tile, concrete slab, lumber, zinc, untreated wood, straw and others). Defined variable categories are:

- Durable dwellings: Both walls and roofing were made with durable materials (masonry or pressure treated wood and tile, concrete slab, lumber or zinc)
- Semi-durable dwellings: At least one of them were made with durable materials

- Non-durable dwellings: Neither of them were made with durable material (mud, untreated wood, straw or others non-durable and untreated wood, straw or others non-durables)

DIMENSION 5: WOMEN'S AGENCY

Topic Area: Shares of women in lower houses of parliaments

***Indicator I.31* – Women as legislators**

Brazil, 2000 and 2010: Women as legislators

Institution	2000			2010		
	Number of positions	Number of women	% women	Number of positions	Number of women	% women
Senate	81	6	7.40	81	11	13.6
Federal Chamber	513	29	5.70	513	45	8.8
State chambers	1,059	133	12.6	1,059	123	11.6
Municipal chambers	55,483	6,454	11.6	51,974	6,511	12.5
Total	**57,136**	**7,822**	**13.7**	**53,627**	**6,690**	**12.5**

Sources: Senate and Federal Chamber, 2000: Htun, Mala N. & Mark P. Jones Los caminos al poder. Seminario del BID/PROLID. Liderazgo de la mujer: teoría y práctica. Cancún, México, agosto de 2000, *apud* Blay, Eva. Mulher e igualdade: cidadania e gênero. Revista Social Democracia Brasileira, março de 2002, available at: <http://www1.psdb.org.br/opartido/Itv/revista/revista_02/p6671_mulher.pdf>. State Chambers, 2000: Jornal Fêmea nº 118, nov 2002. Municipal Chambers, 2000: Kerbauy, M. T. As câmaras municipais Brasileiras: perfil de carreira e percepção sobre o processo decisório local. *Opinião Pública*, Campinas, vol. XI, nº2, Out 2005.
All houses, 2010: <http://www.maismulheresnopoderBrazil.com.br/>.

Notes on information/sources:

No comprehensive data source is available for this indicator. Data on members of some parliamentary houses for 2000 and 2010 have shown inconsistencies according to different sources. Part of those inconsistencies may be due to the fact that occupancy of legislative positions changes over the legislature term, due to substitution rules in case of leaves of absence or nominations for executive positions at any governmental level, positions that are not compatible with a parliamentary post. Substitutions over a period of time end up in a higher number of individuals who have occupied such positions than the official number of chairs. We have used information that seemed to be more consistent after double-checking available sources. The basic criterion was the official number of chairs in each parliamentary house. *Indicator I.31* is the same as *Indicator O.2.*

Topic Area: Shares of women ministers and sub-ministers

***Indicator I.32* - Shares of women as ministers**

Brazil, 1995-2011: Shares of women ministers

Presidential Term	Total of Ministries	% Men	% Women	Ratio W/M
Fernando Henrique Cardoso (1995-1999)	25	96.0	4.0	0.04
Fernando Henrique Cardoso (1999-2003)	30	100	0	0
Luiz Inácio Lula Da Silva (2003-2007)	24	87.5	12.5	0.14
Luiz Inácio Lula Da Silva (2007-2011)	24	95.8	4.2	0.04
Dilma Vana Rouseff (2011-)	38	73.7	26.3	0.36

Source: The Brazilian Government's Official Web Portal http://www.presidencia.gov.br/info_historicas.

Notes on information/sources:

Indicator I.32 is the same as *Indicator O.4*. We have kept the organization of data used in the selected source, considering each presidential term since 1995-1999 up to the presidential term initiated in 2011, the first with a woman president. For that reason, the time period for this indicator is different from the general reference period used in this report. In the presidential election of 2010, the election of a woman for the first time in Brazil had a clear impact on the sex distribution of ministers in the cabinet.

Topic Area: Women in senior positions in political parties, trade unions, employers' associations, professional organizations, NGOs and community-based associations.

***Indicator I.33* - Women in senior positions or leaders in political parties, trade unions, employer's associations, NGOs and community-based associations**

Brazil, 2003 and 2010: Women in senior positions or leaders in political parties, trade unions, employer's associations, NGOs and community-based associations

Senior positions/Leaders	2003		2010	
	Both sexes	% women	Both sexes	% women
Senior positions in political parties	628	59.1	228	54.4
Senior positions in employers, workers and other socio-economic associations	4,089	49.8	3,224	23.6
Leaders of indigenous peoples, *quilombos* and *caiçaras* associations*	246	13.8	363	31.4

Leaders in religious associations/entities	561	64.5	545	53.4
Leaders in NGOs and community-based associations	2,749	49.4	1,531	47.8

Source: Ministry of Labor and Employment/Annual list of Social Information (RAIS, Portuguese acronym). Special cross tabulation
Note: *Quilombos* and *caiçaras* are some traditional populations of Brazil.

Topic Area: Contraceptive use

***Indicator I.34* - Contraceptive use by women aged 15-49 years, by age group and type of method used**

Brazil, 1996 and 2006: Women using contraception by age group and type of method used (%)

Age group	Using any contraceptive method	Pill	Female sterilization	Partner sterilized	Partner using condom	Other methods
			1996			
15-19	14.0	56.3	0.8	-	23.1	19.7
20-24	42.3	56.1	14.7	0.8	12.6	15.8
25-29	64.1	38.0	38.2	1.5	8.9	13.4
30-34	73.7	25.5	55.3	3.7	6.0	9.5
35-39	74.1	13.2	70.1	3.4	4.3	9.0
40-44	71.0	8.9	77.4	1.9	4.1	7.7
45-49	60.3	4.6	80.5	1.2	3.2	10.5
Total	**53.8**	**26.3**	**52.8**	**2.2**	**7.4**	**11.3**
			2006			
15-19	36.2	49.2	0.1	0.4	49.9	13.88
20-24	65.7	55.5	3.5	0.4	34.2	15.86
25-29	71.6	47.5	17.4	3.2	23.6	16.78
30-34	78.3	29.0	34.1	7.3	19.5	14.51
35-39	79.4	21.0	47.6	7.0	14.6	12.98
40-44	79.5	15.9	51.5	8.4	16.9	10.08
45-49	66.9	9.5	68.2	5.4	10.9	7.64
Total	**67.5**	**32.5**	**32.2**	**4.8**	**23.0**	**13.33**

Source: DHS, 1996 and National Survey on Demography and Health of Children and Women, 2006.
Note: Other methods: Intrauterine device (IUD), injection, implant, female condom, diaphragm, abstinence, *coitus interruptus*, morning after pill, and others.

DIMENSION 6: OPORTUNITY AND CAPABILITY

Topic Area: Men's/women's adult literacy rates

***Indicator I.35* – Literacy rates of population aged 15 years and more by sex**

Brazil, 2001 and 2009: Literacy rates of population 15 years and more

Year	Literacy rates		Ratio W/M
	Men	Women	
2001	88.6	88.9	1.00
2009	90.2	90.4	1.00

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Topic Area: Net primary, secondary and tertiary enrolments
***Indicator I.36* - Shares of women enrolled in school**

Brazil, 2001 and 2009: Share of women enrolled in school (Primary, Secondary and Tertiary levels)

Level	Both sexes	% women	Ratio W/M
	2001		
Primary	31,839,062	48.9	1.0
Secondary	7,616,297	54.6	1.2
Tertiary	3,460,178	58.0	1.4
	2009		
Primary	31,166,958	48.1	0.9
Secondary	8,510,464	54.6	1.2
Tertiary	6,107,876	56.9	1.3

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Topic Area: Availability of on-the-job, staff, specialized training for women and men

Indicator I.37 **- Ratio of female/male population aged 25-64 years enrolled in school**

Brazil, 2001 and 2009: Ratio of female/male population aged 25-64 years enrolled in school

Educational Level	Men	Women	Total	Sex ratio F/M
	2001			
Undergraduate	556,368	827,056	1,383,424	1.5
MA. and Ph. D	126,629	120,450	247,079	0.9
Total	**682,997**	**947,506**	**1,630,503**	**1.4**
	2009			
Undergraduate	1,211,344	1,541,537	2,752,881	1.3
MA. and Ph. D	121,035	170,057	291,092	1.4
Total	**1,332,379**	**1,711,594**	**3,043,973**	**1.3**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

Notes on information/sources:

Comprehensive data about on-the-job, staff and specialized training are not available. As suggested in the *Framework on Gender Equality and the Knowledge Society*, we have used as a proxy the US National Center for Education Statistics (NCES) definition for lifelong learning, which is defined broadly as all types of learning activities in which adults engage and which includes both traditional and nontraditional (returning) postsecondary students. The 25-64 age brackets for identifying adults follow the Eurostat criteria. Available at: epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tsiem080.

KNOWLEDGE SOCIETY OUTCOMES: indicators of women's participation in the knowledge society

DIMENSION 1: WOMEN IN KNOWLEDGE SOCIETY DECISION-MAKING

Topic Area: Shares of women as legislators, senior officials and managers.

Indicator O.1 **– Shares of women as senior officials**

Brazil, 2000 and 2010: Women in power

Function	2000			2010		
	Number of positions	Number of women	% women	Number of positions	Number of women	% women
President	1	0	0.0	1	0	0.00
State governors	27	1	3.7	27	3	11.1
Mayors	5,507	304	5.5	5,556	505	9.1
Total	**5,535**	**305**	**5.5**	**5,584**	**508**	**9.1**

Sources: For 2000: http://www.cfemea.org.br/index.php?option=com_content&view=article&id=215:mulheres-na-elite-politica-comparando-o-Brazil-com-outros-paises&catid=68:numero-86-março-de-2000&Itemid=129 For 2010: Superior Electoral Court (TSE).

Indicator O.2 **– Shares of women as legislators**

Brazil, 2000 and 2010: Women as legislators

Institution	2000			2010		
	Number of positions	Number of women	% women	Number of positions	Number of women	% women
Senate	81	6	7.4	81	11	13.6
Federal Chamber	513	29	5.7	513	45	8.8
State Chambers	1,059	133	12.6	1,059	123	11.6
Municipal Chambers	55,483	6,454	11.6	51,974	6,511	12.5
Total	**57,136**	**7,822**	**13.7**	**53,627**	**6,690**	**12.5**

Sources: Senate and Federal Chamber, 2000: Htun, Mala N. y Mark P. Jones Los caminos al poder. Seminario del BID/PROLID. Liderazgo de la mujer: teoría y práctica. Cancún, México, agosto de 2000, apud Blay, Eva. Mulher e igualdade: cidadania e gênero. Revista Social Democracia Brasileira, março de 2002, available at: <http://www1.psdb.org.br/opartido/Itv/revista/revista_02/p6671_mulher.pdf>. State Chambers, 2000: Jornal Fêmea nº 118, nov 2002. Municipal Chambers, 2000: Kerbauy, M. T. As câmaras municipais Brasileiras: perfil de carreira e percepção sobre o processo decisório local. *Opinião Pública*, Campinas, vol. XI, nº2, Out 2005.
All houses, 2010: <http://www.maismulheresnopoderBrazil.com.br/>

Indicator O.3 – Shares of women in the Judiciary

Brazil, 2010: Women in the higher courts of justice

Courts	Number of positions	Number of women	% women
Supreme Court	10	2	20.0
High Court of Justice	30	5	16.7
Higher Military Court	15	1	6.7
Higher Labor Court	27	5	18.5
Higher Electoral Court	7	1	14.3
Total	**89**	**14**	**15.7**

Sources: STF/STJ/STM/TST/TSE – September, 2010. Available at:
http://www.maismulheresnopoderBrazil.com.br/dados/Tribunais_Superiores_Brasileiros_Distribuicao_entre_Mulheres_e_Homens.pdf

Indicator O.4 - Shares of women as ministers

Brazil, 1995-2011: Shares of women as ministers

Presidential Term	Total of Ministries	% Men	% Women	Sex ratio W/M
Fernando Henrique Cardoso (1995-1999)	25	96.0	4.0	0.04
Fernando Henrique Cardoso (1999-2003)	30	100	0	0
Luiz Inácio Lula Da Silva (2003-2007)	24	87.5	12.5	0.14
Luiz Inácio Lula Da Silva (2007-2011)	24	95.8	4.2	0.04
Dilma Vana Rouseff (2011-)	38	73.7	26.3	0.36

Source: The Brazilian Government's Official Web Portal
http://www.presidencia.gov.br/info_historicas.

Indicator O.5 - **Shares of women as ministers and secretaries at state and municipal levels**

Brazil, 2010: Women ministers and secretaries at state and municipal levels

Position	Number of positions	Number of women	% women
Ministers and special secretaries with status of minister	37	3	8.1
Secretaries of state	528	87	16.5
Secretaries of state capitals	398	79	19.9
Total	**963**	**169**	**17.6**

Source: September 2010. Available at: <http://www.maismulheresnopoderBrazil.com.br/dados.php>.

Indicator O.6 – **Shares of women in legal and diplomatic careers**

Brazil, 2000 and 2010: Shares of women in legal and diplomatic careers at the federal level

Career	2000		2010	
	Both sexes	% women	Both sexes	% women
Legal	3,931	**40.7**	8,429	**42.6**
Diplomatic	2,382	**42.0**	3,155	**38.8**

Sources: SRH/MP. Boletim Estatístico de Pessoal, nº 56 (data for 2000) & nº 176 (data for 2010). <http://www.servidor.gov.br/publicacao/boletim_estatistico/bol_estatistico.htm>.

Notes on information/sources:

The Brazilian team interpreted the topic area Shares of women as legislators, senior officials and managers as referring to the public sector. Given that, we decided to include other indicators that can give an idea of gender inequalities in other relevant power spheres.

Indicator O.1 refers to women as senior officials, considered to be the heads of the three levels of government: federal (President), state (Governors), and municipal (Mayors).

Indicator O.2 refers to women as legislators. Legislators were considered representatives at the two federal parliamentary houses – Senate and Federal Chamber -, representatives at the state assemblies and at the chamber of the Federal District of Brasília, and representatives at the municipal level, which involve the existing 5,565 municipal chambers.

No comprehensive data source is available for this indicator. Data on members of some parliamentary houses for 2000 and 2010 have shown inconsistencies between different sources. Part of those inconsistencies may be due to the fact that occupancy of legislative positions changes over the legislative term, given the substitution rules in case of leaves of absence or nominations for executive positions at any governmental level, positions that are not compatible with a parliamentary post. Substitutions over a period of time end up with a higher number of individuals who have occupied such positions than the official number of chairs. We have used information that seemed to be more consistent after double-checking available sources. The basic criterion was the official number of chairs in each parliamentary house.

Indicator O.3 refers to a sector that has not been included in the Framework: the judiciary power. Given the absence of comprehensive information on all levels of justice, we included data only on the higher courts. 2010 was the lone data point available.

Indicator O.4 refers to women occupying the position of ministers of state. We have kept the organization of data used in the selected source, considering each presidential term since 1995-1999 up to the presidential term initiated in 2011, the first with a woman president. For that reason, the time period for this indicator is different from the general reference period used in this report. In the presidential election of 2010, a woman president was elected for the first time in Brazil, with a clear impact on the sex distribution of ministers in the cabinet. Dilma Roussef's presidential term began in 2011. *Indicator O.4* is the same as *Indicator I.32*.

Indicator O.5 enlarges the empirical reference to include state secretaries and secretaries of state capitals. In so doing it makes clear that the participation of women tends to be somewhat higher at the lower levels of power. Unfortunately we could find data only for a single year, 2010.

Indicator O.6 adds other relevant and prestigious niches in Brazilian public administration, the legal profession and diplomacy. Both are special careers, with specific structures and rules. Nevertheless, access and progression follow universal principles, which may explain why differences in the numbers of women and men are not as high as for other prestigious posts.

Topic area: Share of businesses with 35% or more women in decision-making positions

***Indicator O.7* – Women's share in decision-making positions in major businesses**

Brazil, 1999/2000 and 2008/2009: Shares of women in decision-making positions in businesses (%)

Hierarchical level	1999/00	2008/09
President/CEO	13.0	21.4
Vice-president	11.5	17.5
Director	18.7	26.3
Manager	18.9	34.1

Supervisor	25.2	47.6
Head	28.0	42.1
Foreman	40.4	55.6
Coordinator	39.6	55.7

Sources: State Secretariat on Policies for Women, Brazilian Gender Equality Observatory. Annual Report 2009/2010. Available at: <http://www.observatoriodegenero.gov.br/menu/relatorio-anual-2009-2010/relatorio-anual-2009-2010/?searchterm=relat%C3%B3rio%20anual>. Original information from Catho Group.

Notes on information/sources:

CATHO is a major group in Brazil in the headhunting field for all kind of businesses. There is no information on whether companies included in the CATHO Cadaster are all publicly traded companies. Information from CATHO Group is the data source used by the Brazilian Gender Equality Observatory from the State Secretariat on Policies for Women, a federal ministry level unit. It includes 89,075 companies operating in Brazil.

DIMENSION 2: WOMEN IN KNOWLEDGE ECONOMY

Topic area: Shares of women in professional and technical positions
and
Topic area: Shares of women in administrative and managerial positions

***Indicator O.8* – Shares of women in KS, non-agricultural and agricultural occupations**

Brazil, 2003 and 2010: Shares of women in Knowledge Society, non-agricultural and agricultural occupations

Occupational group		**2003**		**2010**	
		Both sexes	**% women**	**Both sexes**	**% women**
KS areas	Legislators, senior officials and managers	1,305,830	41.7	1,964,226	44.81
	Professionals (Arts and Sciences)	2,972,730	62.1	4,572,778	61.6
	Technicians and associate professionals	3,304,935	57.2	4,711,974	55.5
	Subtotal	**7,583,495**	**56.4**	**11,248,978**	**56.1**
Non-agricultural occupations	Administrative service workers	5,630,429	56.0	8,527,995	58.6
	Service workers, shop and market sales workers	6,578,805	43.0	10,225,783	47.1
	Production workers and industrial services	6,667,050	17.2	10,795,855	16.9

Occupational group		2003		2010	
		Both sexes	**% women**	**Both sexes**	**% women**
	Repair and maintenance services workers	1,099,487	20.1	1,105,397	10.3
	Subtotal	**19,975,771**	**36.8**	**30,655,030**	**38.4**
Agricultural occupations	Skilled agricultural and fishery workers	1,352,208	10.7	1,546,346	12.3
Unknown		633,453	5.7	617,798	8.2
Total		**29,544,927**	**40.0**	**44,068,152**	**41.6**

Source: Brazilian Ministry of Labor and Employment (MTE), Annual List of Social Information (RAIS). Available at: <www.mte.gov.br>. Special cross tabulation.

Notes on information/sources:

We have not been able to successfully disentangle the characteristics asked for in both topic area indicators (women in professional and technical positions and women in administrative and managerial positions) in the database mostly often used in Brazil in labor market studies, the National Household Surveys (PNAD).

After evaluating possible alternative sources for *Indicator O.8*, we have finally opted for RAIS – acronym for Relação Anual de Informações Sociais (Annual List of Social Information). RAIS is an administrative register of the Brazilian Ministry of Labor and Employment, one of the main sources for labor statistics in Brazil with a national coverage. Its limitation is that it includes only data on formal employment.

The above-mentioned restriction is minimized in recent years, since the formal labor market has increased in recent years in Brazil. In 2003, there were 29.5 million workers, reaching 44 million in 2010.

Although RAIS information is available since 1980, we have taken 2003 to 2010 data due to the important changes in the Brazilian Occupation Classification (CBO) introduced in 2002, which have turned comparisons for years before 2003 into a very complex matter. Both topic areas are considered in the same table (Indicator O.8).

Topic area: Employment by economic activity (occupation and status) in agriculture, industry and services in KS areas.

Indicator O.9 **– Shares of women in different economics activities**

Brazil, 2001 and 2009: Shares of women in different economics activities (Population aged 10 years and over)

Economic activity	2001		2009	
	Both sexes	% women	Both sexes	% women
Agriculture	15,534,227	31.9	15,714,721	30.7
Transformation industry	9,300,279	29.9	12,815,361	38.2
Construction	4,921,926	2.7	6,894,701	2.8
Others industrial activities	843,714	15.6	782,319	14.2
Trade	10,784,750	42.0	16,484,441	40.2
Services	18,503,027	57.4	14,774,601	74.3
Social	7,425,974	74.0	8,681,400	76.1
Transport, Storage and Communication	3,167,813	9.2	4,435,968	13.7
Public administration	3,635,324	35.7	4,753,656	39.5
Others	1,341,138	39.1	7,352,085	37.7
Total	**75,458,172**	**40.7**	**92,689,253**	**42.6**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.

***Indicator O.10* – Share of women employed in the non-agricultural sector**

Brazil, 2001 and 2009: Shares of women employed in the non-agricultural sector by status (People aged 10 years and over)

Status	2001		2009	
	Both sexes	% women	Both sexes	% women
Formal employee	25,581,547	40.0	37,046,000	41.37
Informal employee	10,839,104	34.4	12,208,774	38.69
Military and statutory civil servants	265,602	2.2	275,034	4.13
Formal domestic workers	1,535,046	89.7	1,995,185	88.68
Informal domestic workers	4,356,181	95.1	5,228,221	94.67
Self-employed	12,734,928	35.1	14,957,823	39.0
Employer	2,696,720	26.3	3,554,146	28.5
Workers in production for own consumption and construction for own use	147,249	11.5	102,956	13.3
Unpaid workers	1,764,533	61.1	1,606,393	63.9
Total	**59,920,910**	**43.0**	**76,974,532**	**45.0**

Source: IBGE, National Household Surveys (PNAD). Survey excludes the rural population of the states of Rondonia, Acre, Amazonas, Roraima, Pará and Amapá. Special cross tabulation.
Note: Agriculture workers are excluded from the total.

Notes on information/sources:

Microdata used for the cross tabulation for Indicator O.10 are the same as for Indicator I.22. The differences are: (a) we have excluded workers in the agricultural sector from Indicator O.10; and (b) Indicator O.10 gives the women's share (%) at each working status; Indicator I.22 compares the distribution of men and of women in the population aged 10 + years among the status categories.

Topic area: Women with high-level computer skills

***Indicator O.11* – Share of women with computer skills**

Brazil, 2005 and 2010: Proportion of urban population aged 10 years and over with computer skills by sex

Skills	2005			2010		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
Used the mouse	45	42	43	100	100	100
Copied or moved a file or folder	32	29	31	76	76	76

Used copy or cut and paste tools	28	24	26	72	73	72
Used basic arithmetic formula to add, subtract, multiply or divide figures in a spreadsheet	20	17	18	53	49	51
Compressed file	17	11	13	37	29	33
Written a computer program in a specialized programming language	7	5	6	20	17	18
No skill mentioned	55	58	57	-	-	-

Source: Information and Communication Technologies Studies Center (CETIC). Available at: http://www.cetic.br/usuarios/tic/index.htm.

Note on information/sources:

Only those who have used a computer sometime in their lifetimes answered the question about computer skills in the research conducted by Centro de Estudos sobre as Tecnologias da Informação e da Comunicação (CETIC, Information and Communication Technologies Studies Center), as follows:

Table O.11-A

Brazil: 2005 and 2010: Proportion of urban population who used computer sometime in lifetime by sex

Have used a computer sometime in life	2005			2010		
	Male (%)	Female (%)	Total (%)	Male (%)	Female (%)	Total (%)
Yes	47	44	45	59	58	59
No	53	56	55	41	42	41
Total	**100**	**100**	**100**	**100**	**100**	**100**

Source: Information and Communication Technologies Studies Center (CETIC). Available at: http://www.cetic.br/usuarios/tic/index.htm.

Topic area: Shares of women among information technology workers

***Indicator O.12* – Female participation among technology and information workers**

Brazil, 2003 and 2010:
Female participation among technology and information workers

Technology and information occupations	2003		2010	
	Both sexes	% women	Both sexes	% women
Technology and information manager	8,689	18.7	21,897	19.8
Biotechnology professional	204	57.8	1,643	61.2
Engineering and technology researcher	3,556	24.9	6,681	19.1
Information technology administrator	4,572	20.6	17,360	19.5
Information technology analyst	89,877	27.5	211,000	23.2
Information professional	12,764	72.4	21,108	65.9
Support technician in biotechnology	619	66.4	858	65.4
Support to research, information and documentation	24,658	42.0	33,463	46.0
Total	**144,939**	**33.3**	**314,010**	**28.3**

Source: Brazilian Ministry of Labor and Employment (MTE), Annual List of Social Information (RAIS). Available at: <www.mte.gov.br>. Special cross tabulation.

Notes on information/sources:

See Notes for Indicator O.8, above.

DIMENSION 3: WOMEN IN S&T AND INNOVATION SYSTEMS

Topic area: Shares of women studying science and engineering at tertiary level

***Indicator O.13* – Share of women among undergraduate students by broad groups of education**

Brazil, 2000 and 2009: Female participation among undergraduate students by broad education area groups

Broad group	2000		2009	
	Both sexes	% women	Both sexes	% women
Agriculture	91,604	39.8	145,120	41.3
Social Sciences, Business and Law	1,239,597	51.1	2,583,467	54.2
Sciences	291,521	38.3	518,517	32.0
Education	685,132	75.3	858,977	69.6
Engineering, Manufacturing, and Construction	304,998	26.8	627,925	27.3
Arts and humanities	124,097	62.2	211,231	55.7
Health and welfare	393,880	69.2	908,357	72.9
Services	47,175	69.5	123,613	62.4
Total	**3,178,004**	**55.4**	**5,977,207**	**54.4**

Source: INEP, Third Level Education Census, 2000 and 2009. Special cross tabulation.
Note: Classification according to the International Standard Classification of Education (ISCED 1997), UNESCO.

Indicator O.14 – **Share of women among undergraduate students by fields of education**

Brazil, 2000 and 2009: Female participation among undergraduate students by fields of education

Fields of education	2000		2009	
	Both sexes	% women	Both sexes	% women
Agriculture, Forestry and Fishing	57,714	32.1	96,470	34.05
Architecture and Building	112,553	41.4	174,464	40.3
Arts	37,391	57.3	112,517	57.2
Life Sciences	48,952	66.1	107,989	67.5
Physical Sciences	73,556	39.6	79,989	41.3
Social and Behavioral Sciences	192,820	61.6	246,648	65.4
Business and Administration	539,293	47.0	1,487,584	53.8
Computing	137,132	26.9	306,538	16.6
Law	396,244	48.9	747,538	50.4
Engineering and Engineering	178,972	15.8	401,958	19.5
Teacher Training and Education	685,132	75.3	858,977	69.6
Humanities	86,706	64.4	98,714	54.0
Journalism and Information	111,240	60.8	101,697	60.6
Mathematics and Statistics	31,881	41.1	24,001	39.0
Manufacturing and Processing	13,473	52.5	51,503	44.6
Environmental Protection	306	36.0	23,818	46.4
Health	363,631	67.1	836,734	71.4
Social Services	30,249	95.0	71,623	91.4
Security Services	403	16.9	5,418	39.7
Transport Services	961	9.8	6,652	23.1
Personal Services	45,505	71.5	87,725	71.2
Veterinary	33,890	52.9	48,650	55.6
Total	**3,178,004**	**55.4**	**5,977,207**	**54.4**

Source: INEP, Third Level Education Census, 2000 and 2009. Special cross tabulation.
Note: Classification according to the International Standard Classification of Education (ISCED 1997), UNESCO.

***Indicator O.15* – Women among PhD degree grantees by broad knowledge area**

Brazil, 2000 and 2008: Women among PhD degree grantees by broad knowledge area

Broad area	2000		2008	
	Both sexes	% women	Both sexes	% women
Agricultural Sciences	545	37.6	1,315	47.2
Biological Sciences	658	62.0	1,238	62.0
Health Sciences	1,003	49.8	1,959	58.8
Exact and Earth Sciences	707	34.8	1,132	37.5
Humanities	876	54.7	1,861	58.7
Social Sciences and Law	425	39.5	868	42.5
Engineering	678	27.6	1,221	33.2
Linguistic/Language/Arts	251	66.1	696	63.8
Multidisciplinary	54	33.3	415	49.4
Total	**5,197**	**45.7**	**10,705**	**51.2**

Source: CGEE, June 2010, available at: <http://www.inovacao.unicamp.br/report/inte-doutoresdemografiaII100628.pdf>

Note on information/sources:

The source is a report prepared by the Center for Strategic Studies and Management in Science, Technology and Innovation (CGEE), an organization under the aegis of the Brazilian Ministry of Science, Technology and Innovation. See: http://www.cgee.org.br/and http://www.cgee.org.br/sobre/cgee_english.php.

Data on this subject formerly came Coordenação de Aperfeiçoamento de Pessoal de Ensino Superior (CAPES), the federal government agency in charge of graduate education in Brazil. See: Doutores 2010, Estudo da demografia da base técnico-científica Brasileira, available at: http://www.inovacao.unicamp.br/report/inte-doutoresdemografiaII100628.pdf.

Topic area: Shares of women scientists and engineers

***Indicator O.16* – Shares of women employed in science and technology occupations**

Brazil, 2003 and 2009: Shares of women engineers, researchers and professors

Professionals	2003		2010	
	Both sexes	% women	Both sexes	% women
Engineers	134,399	14.6	211,111	16.3
Research/development directors and managers	6,271	24.2	12,851	27.8
Biological Sciences researchers	2,433	62.8	3,575	63.0
Exact and Natural Sciences researchers	210	49.1	1.202	46.8
Engineering and Technology researchers	3,556	24.9	6,681	19.1

Professionals	2003		2010	
	Both sexes	% women	Both sexes	% women
Health Sciences researchers	411	66.9	1,958	68.1
Agriculture Sciences researchers	799	27.7	1,237	29.5
Humanities and Social Sciences researchers	1,071	65.1	1,863	65.2
Other professionals in research and analysis	1,611	62.7	2,584	57.0
Professors of Mathematics. Statistics and Computing	11,298	37.6	18,258	40.5
Professors of Physical and Chemical Sciences	2,798	45.5	3,421	35.0
Professors of Architecture, Urbanism, Engineering and Earth Sciences	7,252	24.4	11,172	26.1
Professors of Biological and Health Sciences	58,448	67.9	38,596	52.7
Professors of Education Sciences	96,992	48.2	162,970	52.9
Professors of Language and Literature	21,879	77.4	43,945	79.3
Professors of Humanities	25,799	44.2	33,106	46.0
Professors of Social Sciences	24,654	39.2	28,802	41.8
Professors of Arts	2,567	57.8	4,078	54.3
Total	**402,448**	**39.5**	**587,410**	**39.0**

Source: Brazilian Ministry of Labor and Employment (MTE), Annual List of Social Information (RAIS). Available at: <www.mte.gov.br>. Special cross tabulation.

Notes on information/sources:

See Notes for Indicator O.8, above.

Teaching and research are not dissociable activities at all public and major private universities in Brazil. For that reason, Professors have been also included.

Topic Area: Shares of Women Researchers

Indicator O.17 **– Distribution of researchers by sex and leadership condition**

Brazil, 2000 and 2010: Researchers by sex and leadership condition

Leadership condition	2000		2010	
	Both sexes	% women	Both sexes	% women
Leader	16,456	39.4	37,254	45.1
Not leader	32,190	45.9	91,414	51.6
Total	**48,646**	**43.7**	**128,668**	**49.7**

CNPq, Brazilian Research Groups Directory. Historical Series, 2011. Available at: : http://dgp.cnpq.br/censos/series_historicas/pesquisadores/index_pesquisadores.htm

***Indicator O.18-A* – Sex Ratio of Brazilian researchers by leadership condition**

Brazil, 1995-2010: Sex ratio of researchers (M/F)

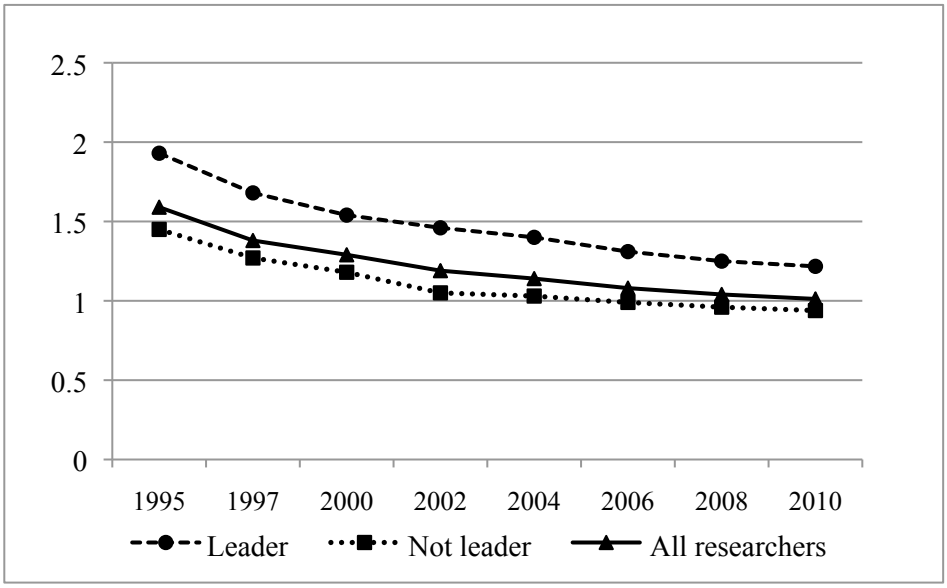
Year	Leader	Not leader	All researchers
1995	1.9	1.5	1.6
1997	1.7	1.3	1.4
2000	1.5	1.2	1.3
2002	1.5	1.1	1.2
2004	1.4	1.0	1.1
2006	1.3	1.0	1.1
2008	1.3	1.0	1.0
2010	1.2	0.9	1.0

Source: CNPq, Brazilian Research Groups Directory Statistics. Special cross tabulation.
Available at: http://www.cnpq.br/estatisticas/bolsas/sexo.htm

***Indicator O.18-B* – Sex ratio of Brazilian researchers by leadership condition**

Graph 1

Brazil, 1995-2010: Sex ratio of researchers (M/F)



Source: CNPq, Brazilian Research Groups Directory Statistics. Special calculation.
Available at: http://www.cnpq.br/estatisticas/bolsas/sexo.htm

Notes on information/Sources:

Data come from the National Council for Scientific and Technological Development (Cap) and are based on the Brazilian Research Group Directory, a register that includes a major part of working researchers in a given year. Group leaders are identified as such in this register.

Topic Area: Comparative rates and trends of publication, M/W

Indicator O. 19 **– Shares of women as grantees of Research Productivity Scholarships**

Brazil, 2001 and 2010: Research Productivity Scholarships by grant level and sex of grantees

Scholarship level	2001		2010	
	Both sexes	% women	Both sexes	% women
SR	0		61	21.4
1A	1,020	22.3	1,038	23.3
1B	718	27.1	1,084	30.7
1C	1,063	28.1	1,284	33.4
1D	1,423	32.3	1,619	32.8
2	3,443	37.2	7,595	37.6
2F	0		260	39.2
Total	**7,666**	**32.1**	**12,942**	**34.8**

Source: CNPq, Foment Statistics and Indicators.
Available at: http://www.cnpq.br/estatisticas/bolsas/sexo.htm. Special calculation.

Indicator O. 20**-A – Sex radio of Research Productivity grantees by grant level**

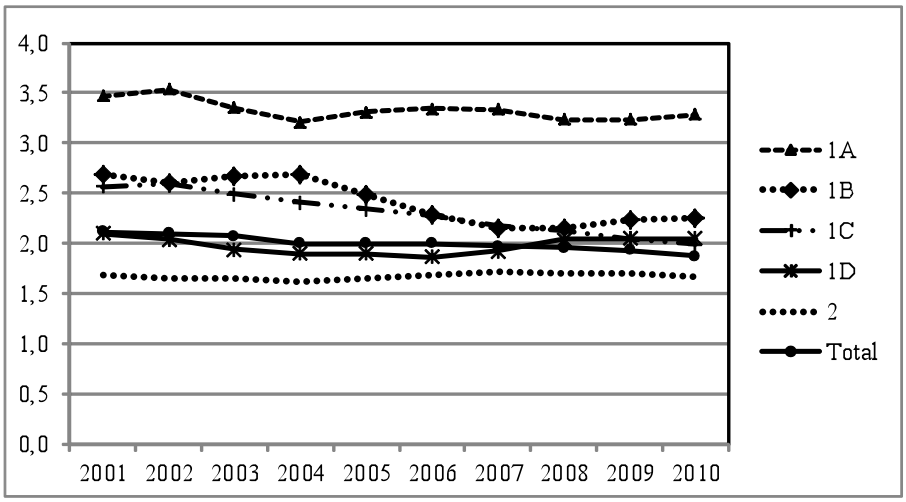
Brazil, 2001-2010: Sex radio of Research Productivity grantees by grant level

Year	SR	1A	1B	1C	1D	2	2F	Total
2001		3.5	2.7	2.6	2.1	1.7		2.1
2002		3.5	2.6	2.6	2.0	1.6		2.1
2003		3.4	2.7	2.5	1.9	1.7		2.1
2004		3.2	2.7	2.4	1.9	1.6		2.0
2005		3.3	2.5	2.3	1.9	1.7		2.0
2006		3.3	2.3	2.3	1.9	1.7		2.0
2007	3.6	3.3	2.1	2.2	1.9	1.7		2.0
2008	3.6	3.2	2.2	2.1	2.0	1.7		2.0
2009	4.1	3.2	2.2	2.0	2.1	1.7	1.9	1.9
2010	3.7	3.3	2.3	2.0	2.0	1.7	1.5	1.9

Source: CNPq, Foment Statistics and Indicators. Available at: http://www.cnpq.br/estatisticas/bolsas/sexo.htm. Special calculation.

***Indicator O. 20-B* – Sex radio of Research Productivity grantees by grant level**

Graph 2
Brazil, 2001-2010: Sex radio of Research Productivity grantees by grant level



Source: CNPq, Foment Statistics and Indicators. Available at: http://www.cnpq.br/estatisticas/bolsas/sexo.htm. Special calculation.

Notes on information/sources:

As no information on trends of publication by sex was found, we explored possible proxies for a Brazilian indicator on that subject. Proxies were built on the basis of information on grants provided by the Brazilian National Council for Scientific and Technological Development (CNPq) to highly productive researchers on a competitive basis. Different eligibility conditions are established for each grant category or level, considering time since PhD, scientific production, Master and/or Doctorate degree advisory, and substantive scientific contribution for his/her knowledge area. Ad hoc referees ground decisions taken by a peer group. Despite that, there is a tendency for older generation grantees to retain their grants for a long time. The demand is greater than availability of such grants, especially for younger researchers.

CNPq Research Productivity Scholarship Classification:

Senior Researcher (SR): 15 uninterrupted years or more as a 1A CNPq Researcher;
Researcher Level 1: at least 5 years since PhD;
Researcher Level 1A; 1B; 1C; and 1D: dependent upon peer evaluation of his/her scientific production, ability for human resources development, and contribution for the scientific field;
Researcher Level 2: at least 2 years since PhD;
Researcher Level 2F: at least 2 years since PhD, and institutional affiliation to new-opened universities.
Source:
http://basedeconhecimento.cnpq.br/bc/listarPerguntaRespostas.do?localRequisicao=portal&acao=exibirPergunta&idPergunta=75832

Indicators O.19; O.20-A and O.20-B are proxies for publication productivity, using data about Research Productivity Scholarships. The number of scholarships per year was calculated as the number of monthly payments under this type of grant divided by 12 months. Sex ratios

were calculated by the standard demographic formula, with men at the numerator and women at the denominator.

Topic area: Gender trends in brain drain in highly skilled fields

***Indicator O.21* – Brazilian skilled migrants residing in OECD countries by sex and migration rates**

Brazilian skilled migrants aged 25 years or more, residing in OECD countries by sex and migration rates for 1990, 2000 and 2010 (number)

	1990	2000	2010
Brazilian skilled population	4,900,238	7,562,900	10,225,562
Number of skilled migrants	63,122	154,808	246,494
Migration rate (100 000 skilled inhabitants)	1.3	2.0	2.4
Number of female skilled migrants	33,998	87,688	141,378
Number of male skilled migrants	29,123	67,120	105,116
% of women among skilled migrants	**53.9**	**56.6**	**57.4**
% of men among skilled migrants	**46.1**	**43.4**	**42.6**

Source: Docquier, Lowell & Martouk, 2008, available at: http://perso.uclouvain.be/frederic.docquier/filePDF/DLM_PDR.pdf. 1990 and 2000 database available at: http://perso.uclouvain.be/frederic.docquier/filePDF/DataSetByGender_Aggregates.xls. Special estimate for 2010.

Notes on information/sources:

Skilled migrants have been defined as foreign-born population with a tertiary-level education living in OECD countries. Source: Frédéric Docquier, B. Lowell, B. Lindsay & Abdeslam Marfouck, 2008, A Gendered Assessment of Highly Skilled Emigration. Available at: http://perso.uclouvain.be/frederic.docquier/filePDF/DLM_PDR.pdf
http://perso.uclouvain.be/frederic.docquier/filePDF/DataSetByGender_Aggregates.xls.
Values for 2010 have been estimated assuming a linear increase of Brazilian outmigration for the 1990-2000 period.

Topic area: Women's early stage entrepreneurial activity

***Indicator O.22* – Entrepreneurship measures by gender**

Brazil, 2001 and 2010: Entrepreneurship measures by gender (%)

Measures	2001		2010	
	Male	Female	Male	Female
Total early-stage Entrepreneurial Activity (TEA)	16.9	10.3	18.4	16.2
Improvement-Driven Opportunity Entrepreneurial Activity: Relative Prevalence	10.4	6.0	12.3	11.0
Necessity-Driven Entrepreneurial Activity: Relative Prevalence	6.5	4.4	5.9	5.0
Nascent Entrepreneurship Rate	10.7	7.2	6.7	4.8
New Business Ownership Rate	6.6	3.1	11.9	11.4

Source: Global Entrepreneurship Monitor (GEM) 2001 and 2010. Available at: http://www.gemconsortium.org/files.aspx?Ca_ID=123.

Notes on information/sources:

Definitions used by GEM:

Total early-stage Entrepreneurial Activity (TEA): Percentage of 18-64 population who are either nascent entrepreneurs or owner-managers of a new business.

Nascent Entrepreneurship Rate: Percentage of 18-64 population who are currently a nascent entrepreneur, i.e., actively involved in setting up a business they will own or co-own; this business has not paid salaries, wages, or any other payments to the owners for more than three months.

New Business Ownership Rate: Percentage of 18-64 population who are currently a owner-manager of a new business, i.e., owning and managing a running business that has paid salaries, wages, or any other payments to the owners for more than three months, but not more than 42 months.

Improvement-Driven Opportunity Entrepreneurial Activity - Relative Prevalence: Percentage of those involved in TEA who (i) claim to be driven by opportunity as opposed to finding no other option for work; and (ii) who indicate the main driver for being involved in this opportunity is being independent or increasing their income, rather than just maintaining their income.

Necessity-Driven Entrepreneurial Activity - Relative Prevalence: Percentage of those involved in TEA who are also involved in entrepreneurship because they had no other option for work.

***Indicator O.23* – Entrepreneurs by sex**

Brazil, 2001 and 2010: Entrepreneurs by sex

Year	% Female	% Male	Total
2001	38.0	62.0	100.0
2010	49.3	50.7	100.0

Source: Global Entrepreneurship Monitor (GEM) 2001 & 2010.
http://www.gemconsortium.org/files.aspx?Ca_ID=123.

DIMENSION 4: WOMEN AND LIFELONG LEARNING

Topic area: Women as users of (village) knowledge centers

Data unavailable for Brazil

Topic area: Women as managers of (village) knowledge centers

***Indicator O.24* – Share of women among directors of municipal public libraries**

Brazil, 2009: Share of women among directors of municipal public libraries by region

Region	% women
North	80
Northeast	82
Central-West	82
Southeast	85
South	88
Total	**84**

Source: FGV, National Census of Public Municipal Libraries.

Notes on information/sources:

Village-level data for Brazil was very hard to find. No adequate information on women as users or as leaders of learning-related centers is available. The only meaningful, but limited, information we could find was on women directors of municipal public libraries for 2009.

Data come from the first National Census of Municipal Public Libraries (BPMs), conducted under the auspices of the Ministry of Culture of Brazil in 2009 and covering the 5,565 existing municipalities. It shows that in 2009, 79% of Brazilian municipalities had at least one open public library, which represents 4,763 municipal libraries in 4,413 municipalities.

Notes on information/Sources:

Adequate information for the women in life-long learning dimension has been hard to find. This is true especially for sex-disaggregated data. The data on directors for municipal libraries was found only for 2009. Apparently past governmental initiatives to create a national public register of cultural organizations have not succeeded.