Amlan's blog

Welcome to Amlan's blog

- **My latest work on the index of refraction and economic inequality**

  26 April 2016

  My latest paper on the index of refraction and economic inequality is accepted for presentation at the 34th IARIW (International Association for Research in Income and Wealth) General Conference in Dresden, Germany, 21-27 August 2016.

  Title: A new pro transfer-sensitive measure of economic inequality under the Lorenz curve framework in analogue to the index of refraction of geometrical optics.

  The paper is available at: http://www.iariw.org/dresden/amlanmajumder.pdf.

  About this present version of the paper: This version of the paper differs from its earlier versions in many ways.

  1. Quantitative changes

  a) Previous versions of the paper used data on quintile shares of income from the World Development Indicators (WDI) 2014. The present version uses data on decile group shares of income from the UNU-WIDER World Income Inequality Database (WIID3.0b), September 2014.

  b) In the previous versions we had 140 cases for analysis. In the present version there are 2587 cases for 149 countries stretching from 1932 to 2012.

  2.Qualitative changes

https://amlan.co.in/blog

a) The present version of the paper incorporates the proposition of Thomas Piketty* (2014, p. 266). He preferred to study inequality conditions at different levels of an income distribution separately over the use of a single summary measure, such as Gini coefficient, as the social reality and economic and political significance of inequality are very different at different levels of a distribution.

* Piketty, T. (2014). Capital in the Twenty-First Century, Harvard University Press, Cambridge.

b) A new vocabulary is introduced in economics of inequality, such as "anomalous inequality" in accordance with that of "anomalous refraction" of geometrical optics. The name of the indices are also changed, such as "refractive inequality index" in accordance with "refractive index" of optics; and "refractive Lorenz index" in analogue to the Gini index.

c) The relationship between Gini coefficient and the new proposed measure is made clearer. Gini coefficient and RLI are closely related to Lorenz curve. The former is equal to twice the area bounded by the deviated Lorenz curve and that in the ideal condition. The latter is the ratio of the length of the deviated Lorenz curve to that in the ideal condition.

d) The empirical relationship (in Section 6) between the said two is revised. Both are now related by power equation. However, such an empirical relationship holds good when there exists one-to-one correspondence between Gini coefficient (or the bounded area) and the length of the deviated Lorenz curve. For example, if two (or more) different Lorenz curves represent the same bounded area (i.e., Gini coefficient), the said relationship will break theoretically.

e) One may relate it with the hypothetical example cited in Section 7. Or one may also relate it with the idea of 'Adanac' as presented by Lars Osberg** (1981, p. 14). It considers a simple two class example in which the Gini coefficient is held constant while the size of the rich and poor changes. In such cases, although the bounded area or Gini coefficient remains constant, angles of incidence or the length of Lorenz curves may differ leading to different RIIs and RLIs.

** Osberg, L. (1981). Economic Inequality in Canada, Butterworths, Toronto.

f) The ornamental portion is dropped, as incorporation of too many things may make the paper complicated. However, the ideas remain the same. If refractive inequality index (RII) for a particular income group reaches the vicinity of that of Diamond (2.42), it indicates significantly higher concentration of wealth or income in that group as compared to the ideal condition with an RII value of 1.00.

- **Updates in regard to: ECINEQ Working Paper 2014-346**

17 May 2015, 19 March 2015, 01 January 2015 & 30 December 2014

I am writing in connection with the following Working Paper: http://www.ecineq.org/milano/ WP/ECINEQ2014-346.pdf.

The paper is published in Economics Bulletin: http://www.accessecon.com/Pubs/EB/2015/Volume35/EB-15-V35-I2-P110.pdf.

In ECINEQ20014-346 (pp. 2-3, & p. 8), I wrote that the method of computing economic inequality for each stratum under a discrete Lorenz curve could also be applicable in case of a continuous Lorenz curve. However, this is not correct. Snell's law [of the form 'i sin (θ) = constant', as demonstrated in the said paper] is useful in studies when a ray of light passes through different media with refractive index being piece-wise constant for each of the medium. In continuous case, conceptually, there will be one single medium only with continuously varying refractive index. In such a case, the refractive index is to be computed using a differential form of Snell's law (simply by differentiation of the above expression), as discussed elaborately in literature of optics[*]. However, in continuous case, the OI index, which is based on the length of the Lorenz curve, can be computed simply by replacing the summation used in case of 8a or 8b or 8c (p.7) by an integral.

[*] As derived by (i) Prof. Daniel Arovas in his lecture on 'Calculus of Variations' under Classical Mechanics, available at: http://physics.ucsd.edu/students/courses/winter2008/physics110b/LECTURES/CH05_VARIATIONAL.pdf (accessed on 19 March 2015); and (ii) Prof. J. B. Tatum in his lecture on 'Reflection and Refraction' under Geometric Optics, available at: http://astrowww.phys.uvic.ca/~tatum/goptics/geomop1.pdf (accessed on 19 March 2015).

Recently, in response to ECINEQ20014-346, Prof. S. Subramanian wrote a research note, titled "More tricks with the Lorenz curve" (communicated with this author by email), where he presented some simple ideas involving manipulation of the Lorenz curve with a view to generating a class of parametrised versions of the Gini coefficient of inequality such that, over well-defined ranges of the parameter values, the inequality measure would reflect a 'right-wing' orientation by

satisfying an 'anti transfer-sensitivity' property, a 'centrist' orientation by satisfying a 'transfer-neutral' property, and a 'left-wing' orientation by satisfying a 'pro transfer-sensitivity' property.

This note is in continuation of Subramanian (2010) [Subramanian, S. (2010). "Tricks with the Lorenz Curve", Economics Bulletin, 30 (2): 1594-1602.], where he made it clear that the transfer-neutral Gini coefficient is a linear convex combination of two measures which are anti transfer-sensitive and pro transfer-sensitive respectively. According to him, the pro transfer-sensitivity of the latter is reminiscent of a similarly 'left-wing' inequality measure derived from the Lorenz curve, which is based on the length (rather than area, as in the case of the Gini coefficient) of the Lorenz curve, as advanced by Amato (1968, p. 261) [Amato, V. (1968). Metodologia Staistica Strutturale, vol.1. Cacucci, Bari.], Kakwani, (1980, pp. 83-85) [Kakwani, N. 1980. Income Inequality and Poverty: Methods of Estimation and Policy Applications, Oxford University Press, New York, pp. 83-85.] and the one based on index of refraction as proposed in my paper under discussion (ECINEQ20014-346).

Thanks to my conversation with Prof. S. Subramanian, I came to know yesterday (29 Dec 2014) that the expressions 8b & 8c (p. 7) of my paper is equivalent to "A New Inequality Measure" proposed by Kakwani in 1980. [Kakwani, N. 1980. Income Inequality and Poverty: Methods of Estimation and Policy Applications, Oxford University Press, New York, pp. 83-85.]

Knowing of this fact is quite inspiring for me. I was too worried about my findings! Now I am more confident and clear about my work and contribution. Surely I will connect the said measure of Prof. Kakwani with my findings while developing my paper further. I am grateful to Prof. Subramanian for this valuable information with his comments and suggestions.

After the initial submission of my paper to ECINEQ, Francesco Andreoli commented (on 12 Nov 2014) as follows: " The OI index is a standardized measure of the length of the Lorenz curve compared to the diagonal length. The Gini index is, instead, the area among the two. It would be, I think, good to clarify this point in the introduction, so that those who do not care too much of the technical part can still grasp the interpretation they can give to the OI index, and see how it can

be extended to situations where you estimate a smoothed Lorenz curve, instead of looking at Lorenz curve based on grouped data. I also wonder if nothing has been done in the literature about the length of the Lorenz curve." Although I addressed most of his suggestions, my quick search did not reveal the said work of Prof. Kakwani. I convey my thanks to Andreoli too for his previous concern on the issue of literature.

However, I am presenting below my conversation in these regards with Prof. S. Subramanian [Cc: Francesco Andreoli (of ECINEQ)] for my readers convenience (both in text and pdf formats; the pdf version is downloadable here):

-----Original Message-----

From: Amlan Majumder

Sent: Monday, December 29, 2014 6:57 PM

To: Sreenivasan Subramanian

Cc: Ecineq Working Papers ; Francesco ANDREOLI

Subject: Re: post-script

Cc: Francesco Andreoli (of ECINEQ)

Sir,
Just now I have downloaded the book from the World Bank website.
Yes, in p. 83, there is a measure based on the length.
[But, I differ slightly from him as the max length will never be 2 (for grouped data,

when number of groups is small), rather it will be 1.81 as I discussed in p.
7 in connection with equation 8c (and in my previous ECINEQ WP 298 of 2013).
However, the issue disappears when n is large.]
However, I will read it and connect it with my work on use of Refractive
Index as inequality measure.
Many thanks for your guidance.
The selected page of book is attached with this email.
Hope you will guide me further in this regard.
Best regards,
Amlan.

-----Original Message-----
From: Sreenivasan Subramanian
Sent: Monday, December 29, 2014 6:20 PM
To: Amlan Majumder
Subject: Re: post-script

Amlan, her's the reference:
Kakwani, N. Income Inequality and Poverty: Methods of Estimation and
Policy Applications, Oxford University Press, New York, 1980, 450
pages.
_____
On 12/29/14, Amlan Majumder <amlan@amlan.co.in> wrote:
> Sir,
> I have not seen the said book.
> I started with refractive index and then it appeared (in derivation) that
> is
>
> is related with the length of the Lorenz Curve.

> However, please let me know about the book. I will try to collect it.
> Many thanks for your inspiring words.
> Best,
> Amlan.
>
> -----Original Message-----
> From: Sreenivasan Subramanian
> Sent: Monday, December 29, 2014 5:57 PM
> To: amlan@amlan.co.in
> Subject: post-script
>
> Amlan, I seem to recall that Kakwani in his 1980 book advances a
> measure of inequality based on the length of the Lorenz curve. You may
> want to take a quick look at that if you haven't already done so.
> Best: Subbu.
>
>
Dear Amlan, A very happy and fulfilling New Year to you, too. A quick
look at your paper suggests that it is fascinating - bit it will have
to await a careful reading. You may want to send copies to Peter
Lambert at the University of Oregon and to Sidiq Osmani as well. All
the best, and keep at it! -Subbu.

On 12/29/14, Amlan Majumder <amlan@amlan.co.in> wrote:
> Sir,
>
> Season's greetings and Happy New Year to You.
>
> I have found a very important relationship between Gini Index and Index of

> Refraction (of Physics / Optics). It is available here:
> http://www.ecineq.org/milano/WP/ECINEQ2014-346.pdf.
>
> Although my presentation (at this stage) is eccentric and mixed up with
> fantasy, I hope to follow a traditional approach while developing it
> further.
>
> Best regards,
>
> Amlan.
>

- **On Utilisation of Grants from the University Grants Commission by the Colleges under Section 2f/12B in India**

25 August 2014   (*a pdf version with tables & statistics is available here*)

I am going to write on one issue of the College-level higher education system in India. Before proceeding further, I would like to introduce you with one character, Mejda – meaning middle senior brother. We studied the story of Mejda during our school days. The story is a part of the novel, Srikanta written by Sarat Chandra Chattopadhyay, an Indian novelist and short story writer of the early 20th Century. An English version of it is available at http://archive.org/stream/srikanta00cattrich/srikanta00cattrich_djvu.txt (accessed on: 04 July 2014).

Part of the story: It had rained the whole day and was still raining. The heavy sky of July was overcast with dark clouds, and thick darkness had come on before it was fairly evening. My cousins and I had taken our meals early and according to our invariable custom had sat down before our books on a bed spread out in the sitting-room, to study by the light of a castor-oil lamp. Outside, my uncle was taking his evening siesta on a canvas cot at one end of the verandah, and at the other end old Ramkamal Bhatchaj, after his usual dose of opium, was smoking a hookah, his eyes closed in the gloom.

The up-country servants in the portico outside were reading Tulsidas's Ramayana in a sing-song drawl, and we three cousins were attending to our studies in silence under the strict supervision of Mejda. Chhotda (little senior brother), Jatinda (Jatin is the name and 'da' is a contraction of 'Dada' which means elder brother), and I were students of the third and fourth classes, and our Mejda of grave aspect, having failed in the Entrance Examination (now Matriculation Examination) twice, was now, with solemn application and profound attention, preparing for it the third time. Under his iron rule none of us could waste a single moment in idle distractions. Our study time was from 7-30 to 9 p.m. In order that we might not disturb Mejda's serious studies by talking during this period, he used every day, as a preliminary measure, to cut twenty or thirty small slips of paper somewhat like railway tickets. He would then mark some of them 'Out', some 'Spitting', some 'Blowing the nose', some 'Thirst', and so on. Imagine Jatinda dying for a drink. He would take a ticket. Mejda would sign it and endorse 'allowed from 8-33 to 8-34', meaning that this was the period within which the thirst was to be satisfied. As soon as Jatinda went out with the ticket in hand, Chhotda presented a ticket for 'Spitting'; but, by an endorsement of 'No', Mejda signified his disapproval. In consequence, Chhotda sat still with a grave face for two minutes and then brought up a petition for 'Thirst'. This time Mejda accorded his sanction, writing, 'Allowed from 8-41 to 8-47'. As soon as Chhotda had gone out beaming with the permit, Jatinda returned and presented his ticket to Mejda. Mejda compared the time noted on the ticket with the clock, took out a book, and pasted down the ticket on one of its pages. All the requisite materials for these varied operations used to be kept close at hand. At the end of the week, if on some occasions we had overstayed our leave or if our requests for tickets had been too frequent, we were called upon to explain.

Thus, under Mejda's extremely vigilant and orderly government, neither we nor he wasted a single instant of our allotted time for study. Every night when we preceded to bed after such intense application to books the Goddess Saraswatii must certainly have escorted us as far as our bedroom door.

I beg to be excused in advance if the story of Mejda is irrelevant here. However, I must tell you that Mejda neither received recognition for his talent in his time nor in our time. But, I strongly feel the need for Mejdas in College level higher education system in India today simply for our survival and I salute him recognising all of his talents.

I visited the website of the University Grants Commission (UGC) recently [http://www.ugc.ac.in/recog_College.aspx (accessed on: 21 August 2014)] and have been able to retrieve data on Utilisation of fund (%) noted by the Commission against grants allocated and released (all schemes) to the Colleges

(under Section 2f/12B) during XI[th]Plan period (01.04.2007 to 31.03.2012) for 1550 Colleges under 25 State Universities in eight States. Surprisingly, after doing a preliminary analysis, I have found that percentage of utilisation of fund noted by the UGC is significantly low. Nearly 28 % Colleges reported (or as noted by the UGC) utilisation of less than one per cent of the total fund they received. Slightly more than one per cent of the Colleges (1.3 %) reported nearly 100 % or full utilisation. The average figure (utilisation of fund) is 27.97 %. The median percentage is 12.21, i.e., 50 % of the Colleges remain below this mark. . At the University-level, utilisation rates vary from 1.34 % (T. M. Bhagalpur University) to 70.29 (Dibrugarh University). At the State-level utilisation rates vary from 4.92 % (Bihar) to 70.01 % (Assam).

There are 17 Colleges for which 100 % utilisation of fund is noted. Out of these 17, eight are located in Karnataka, three in Kerala, two in Orissa, one each in Bihar, Madhya Pradesh, Rajasthan and West Bengal.

If overall performance is considered, Assam performed the best. Not only that, the State performed very consistently, as shown in tables 3 and 4 in the annexure. While for other States the utilisation rates (%) vary from 0 to 100, in Assam those range from 65 to 74 with a very low standard deviation. This is good. If all the Colleges tend to report 100 % utilisation, all the measures of dispersion will tend to zero. Concentration of Assam around five or six figures (within this short range) is sharp in contrast to wide dispersion experienced by other Colleges in the remaining States.

As level of utilisation of UGC fund is abruptly low throughout the Country (with some exceptions), a major change in the system only can save College-education and improve academic environment thereby. Instead of transferring fund to College accounts directly, the UGC may make payments directly to the relevant parties for their goods and services. For example, upon approval of a purchase proposal from the UGC, College may purchase books and equipment from suppliers and they may be paid directly by the UGC. In case of construction of buildings or developing basic infrastructure, UGC may directly arrange/recruit Construction Company/Agency (Central or State PWDs or else) and pay them directly for their work. It would also be good if one separate infrastructure development agency is formed for the higher education system.

If the system is not changed, whatever be the state of affairs, the only option remains in front of the majority of the College teachers in the Country is to imitate Mejda immediately without any further question. Although functioning of the

Colleges varies across Universities and States (and financial responsibility lies with College Authority), the issues with the UGC are dealt with by the teachers only with the help of Office staff through a statutory body, UGC Sub-committee. Oh Mejda why don't you empower us with all of your talents and skills so that we can comply with the necessary technicalities and save the higher education system for a better future!

[The full version of the commentary (with tables & statistics) is available here.](#)

- **If India goes digital can the health sector remain far behind?**

22 August 2014

For each district there should be an interactive web portal (fully functional with payment gateway facility) highlighting all the inputs to and output of the health care system. This will enhance utilisation of public health care enabling many of this modern era to interact with the system (taking appointment, audio-visual sessions etc.) with clarity and ease in case of both paid and freely available preventive and curative services.

Public health facilities in a district include primary level facilities as well as Sub-Divisional and District Hospitals at secondary level. In some cases, it may include tertiary level health care institutions, such as Medical Colleges or Super Speciality Hospitals. Although, tertiary level health care institutions maintain websites, such initiatives, as proposed for the primary and/or secondary care at district level, are less extensive and less known. This custom may also be followed for the private sector too (at district level), which is by and large unknown both in quantity and quality, although run parallel to the public health care system.

Inputs to the health care system mean physical infrastructure (plants and equipment), intermediate goods and services (drugs and bandages etc.), and manpower (medical and para-medical staff) etc. Output means cases treated, hospital admissions, validation services (medical or fitness certificates) etc. When inputs to the system are known, do we really need billion-rupee projects like Facility Survey conducted by the Ministry of Health and Family Welfare (MOHFW) in every five years covering all the districts of the Country? We know that data of the first round of the Facility Survey (1998-1999 / probable reference period: 01 January 1996 - 31 December 1998) were not made public. Further, if output of

the system is presented in an appropriate way (following the International Classification of Disease and codes of Global Burden of Disease Study), we need not to solely rely on regional, small-scale and scattered sample surveys on epidemiological profile for formulating policies at national level. Of course, for non-utilisation of care or for reliance on traditional healer, we may need to rely on sample surveys. I hope through digitalisation of the public health care system and medical statistics India will move a step forward, the way it appeared as the first country in the world by establishing a nationwide network of family welfare services in 1951.

- **SMS from IODBTL on giving up LPG subsidy**

04 August 2014

I have received a mobile phone message from IODBTL on 31 July 2014: "Give up your LPG subsidy & be part of nation building movement to provide subsidised cooking fuel only to the needy."

Although it is not an order – probably a request, this is a good gesture and as a student of economics I support this initiative. I have recommended provision of LP Gas for cooking for the needy in my recent E-book on forest villages and tea gardens in North Bengal (p. 21), which is available at: http://amlan.co.in/research_projects. Also, I supported the recent hike in railway fare and freight charges publicly (please see my last communication as well as my personal website, http://amlan.co.in/blog).

Although many people (like me) may support this nation building initiative (on giving up 100% LPG subsidy), they may not be able to respond to it instantly for many practical reasons (to be discussed in another occasion).

When fund raising for nation building is an issue, a wider participation of common mass is important both economically and socially as well. In such a situation, I would like to submit that:

(1) IODBTL should implement at least a 10-point scale (or a similar graphic one) so that one can give up subsidy gradually according to her or his ability. For example, one can give up 10% subsidy instantly and gradually she or he may opt for higher options.

(2) Such an initiative is appropriate for allocation of any publicly provisioned or provided goods and services. To be more specific, there should be a minimum fixed price for one public good or service. One must pay this minimum price. In addition to that, there should be an option to pay more according to individual willingness to pay. This is optional. One may or may not exercise it. For example, the Sleeper Class Railway Fare from Ahmedabad to New Delhi is Rs. 455/-. However, with the objective of nation building, one may pay Rs. 460/- or more (it may be any figure beyond the minimum fixed price). The difference amount should go to the said fund.

(3) Sacrifice of money or wealth either in the form of donation or subscription plays crucial role to run various organisations and missions in India. There are ample of such instances in every nock and corner of the Country. Some of them are too gigantic and are known to all.

Can India go for such a fund raising initiative with the sole objective of nation building so that everybody can contribute to it according to their ability to sacrifice? This idea goes with that of a Utility Monster (as discussed in Political Philosophy literature), which is based on sacrifice of resources or whatever makes life worth living. I consider a government or a democratic system too as a Utility Monster. If we sacrifice little for it (in the form of tax or so) it will give us enormous volume of 'good' in return. I am writing about it in my personal website, http://amlan.co.in/economics_of_sacrifice_and_altruism for past few years. I hope the idea will be appreciated by all.

- **Congratulating the Central Government on bold step to increase railway fare**

23 June 2014

I congratulate the Government for taking a bold step to increase railway fare for passengers and freight charges. This has been absolutely essential for the development of railway infrastructure as well as to address passenger comfort and safety related issues.

Dignitaries of other political parties, who are commenting negative on this positive move of developing railway infrastructure, are actually supporting the 'vicious circle of railway poverty' and disrespecting the freedom of common

people to travel freely with dignity. Limited infrastructure not only contributes hardship to a decent way of living but also poses a threat to smooth functioning of the system leading to a badly growth of black economy in regard to ticketing, etc.

The process of development, when perceived from the point of view of governance, is nothing but a game in a democracy like India with the government in one side and the opponents in the other. It is very difficult to achieve the pre-determined goals for a government as the opponents play in the opposite direction. The closest example of such a situation is that of a football game. At times the game may end up with undesired outcome. However, surprisingly the opponents judge performance of a Government contrasting the objectives at the beginning and accomplishments at the end. They suppress and ignore all the negativities they imposed on the development process! This logic is equally applicable for all the State Governments as well.

However, I am confident enough that the issues related to infrastructure of our Country will be dealt with sheer attention by the present Government with the leadership of Shree Modi-ji.

I am citing two examples of poor infrastructure of Indian Railway (& public transportation system) from my personal experience.

Example 1. On 19 July 2013, I was going to Italy to attend an International Conference of the Society for the Study of Economic Inequality (ECINEQ) from Cooch Behar. I had air tickets from Bagdogra to New Delhi and then from there to Italy via Germany. The nearest railway station to reach Bagdogra Airport from Cooch Behar (COB) is New Jalpaiguri (NJP), which is 131 kms away from COB. From NJP it is half-an-hour drive to Bagdogra Airport by taxi. The departure time of the flight from Bagdogra was 2.05 pm and boarding gates were scheduled to close at 1.20 pm. I boarded a local train from COB at 7.05 am (Train No. 75720), which was scheduled to arrive at NJP at 10.40 am. The fare was just Rs. 25/- only. However, by 10.40 am the train reached Jalpaiguri Road (JPE) covering 92 kms only (for lots of crossing and longer halts for express and goods trains in most of the stations). Suddenly I felt that something was going wrong. I got down from the train (without luggage) and rushed to the Station Superintendent's Office. I enquired about whether the train would reach NJP in an hour or so. I was told that there are two more important express trains to go and it might take

another two hour or so to reach NJP. The train was about to leave. I made a call to my brother-in-law who lives in Jalpaiguri and asked him to arrange immediately a taxi for me for the airport and I rushed back to the train and de-boarded with luggage. I took a taxi from the station to Jalpaiguri Town @ Rs. 200/- and reached there. The airport is nearly 55 kms away from there, but no taxi driver was agreeing to go as the road was abruptly broken. Everybody told that it may take 2-3 hours to reach the airport. I became too nervous. However, my brother-in-law managed one taxi @ Rs. 1500/- (Tata Indica Vista, which is believed to be very efficient for rough roads) and advised the driver to go through villages avoiding the usual main road. So, we made a cross-country race for nearly two hours and reached the airport at 1.15 pm. In between I requested the Air India Airport Office to wait for me describing my situation. They extended the boarding time for me for another ten minutes, i.e. 1.30 pm. However, I reached the airport within the scheduled time for checking in. I have been able to attend the Conference, ECINEQ, Bari 2013 and my paper is published as Working Paper Series, ECINEQ 2013-298, http://www.ecineq.org/milano/WP/ECINEQ2013-298.pdf.

I am thankful to everybody who helped me to make my mission successful.

The train (No. 75720) reached NJP on 19 July 2013 after 2.00 pm. Please imagine what would happen if I would continue my journey with that! Usually, when I have flight at noon from Bagdogra, I reach Siliguri one day early by train and spend one night in hotel. Nowadays I do not prefer road transport as condition of the rods is very bad and it takes 6-7 hours to reach Siliguri from Cooch Behar (the distance and route are not fixed as drivers/vehicles explore all possible and available ways, lanes, village roads, paths, State Highways, National Highways, etc. to reach the destination). However, all these sufferings, unnecessary expenditure, etc. are due to poor infrastructure of the public transportation system.

Example 2. Occasionally I travel in Second Class (of Indian Railway) without reservation. I must mention my background here. I have experience of travelling by trains in different continents of the globe including in many industrially advanced countries. However, at times either because of scarcity of reserved category tickets or simply to witnessing the sufferings of common people, I do travel in Second Class. Few years back, I was travelling from Kolkata (HWH) to Cuttack (CTK). The distance is 409 kms and the fare was around Rs. 130/-. It was an overnight journey. The train was about to depart at 10.00 pm. I reached the station around 7.00 pm and stood (actually sat) on the queue. Police came to control the queue after the train was placed. Boarding started around 9.30 pm. Within few minutes with enormous pressure from the back somehow I reached inside the compartment. I got a place to stand only keeping one foot usually on

the floor and touching the toe of the other. Whole night I remained on standing. Every corner of the compartment was full of passengers. People were sleeping on the floor. One slept on my foot (making it a pillow). Vendors were selling teas and snacks like monkeys hanging from the roof using the upper bunks. A person sat on a seat in front of me. His name is Ratan. He works for a courier company. He travels regularly and manages seats. He advised me to contact him before my next journey. Probably he realised my sufferings. I told him that I will return day after tomorrow. He told me that he will also return on that day and keep one seat for me. He told me the sequence of (Second Class) compartment from the engine. He also told me that some persons at the gate will not allow me to get into the compartment and I should take his name (Ratan). I did that. I was denied entry – I took the name of Ratan and I was allowed. Ratan kept his promise. He kept a seat for me - he offered me that after dusting it with his towel. Thanks Ratan!

These are some of the examples of poor infrastructure of Indian Railway. I have closely observed sufferings of common people (with them) due to inadequate infrastructure and I am supporting the initiative of the present Government (and Indian Railway) for a positive change.

- **On Railway Infrastructure and System & ticketing and price discriminations**

23 June 2014

Although I am not an expert in the field of railway infrastructure and system, I would like to highlight some points before the coming railway budget for possible considerations.

1. I have a feeling that the basic infrastructure in independent India has been developed following those of technologically advanced but sparsely populated countries. India should now incorporate crowd management system with the existing infrastructure. For example, Japan has a very effective crowd management system in railway terminals and stations. In Japan, even in a small station a passenger can change platform using (i) sub-way, foot-over bridge (with escalator), and (iii) elevator. Tickets are sold through numerous vending machines (in Europe local train tickets are sold through numerous private channels). In big terminal stations (in Japan), platforms for de-boarding are separate and have multiple options for evacuations. Of course, we have coolies in the platforms, but their service cannot be an alternative to modern technology-driven passenger-friendly crowd (and luggage) management system.

2. With a regional focus, I must highlight that a wide region in North Bengal (part of Jalpaiguri and Cooch Behar districts), which comes under NFR, has single railway track. People of this region (and beyond) are suffering tremendously for longer duration of travel due to so-called 'crossing', etc. For example, a local train takes 5-6 hours to cover 126 kms in between New Jalpaiguri (NJP)/Siliguri and New Cooch Behar (NCB). Further, sufferings of the local commuters have gone to the extreme because of the degradation of the parallel road-transportation system over a decade or so for poor-maintenance of roads including portions of NH 31. While ten years ago a bus used to take 3 hours to run in between Siliguri and Cooch Behar, now such a journey by road requires 6-7 hours. During monsoon journey time increases. So, the issue of single railway track and that of increasing number of local trains is an urgent necessity of this region.

3. Although Cooch Behar belongs to West Bengal, it is close to the North-Eastern Hilly Region and is served by NFR. New Cooch Behar (NCB) Station is in between New Jalpaiguri (NJP) and Guwahati (GHY). One can imagine rush in the trains which pass through NCB with regular & tourist passengers of NJP (Siliguri, Darjeeling and Dooars region) as well as those of the GHY (and the whole North-East). Such a situation severely restricts the freedom of common people of this region to travel freely and communicate with the rest of the Country. Introduction of long-distance new trains under NFR or increasing the frequency of services is also an urgent necessity.

I am making a separate points on issues related to ticketing and price discriminations.

1. IR has introduced dynamic price system for few premium trains. The idea has been borrowed from Airline Industry, where initially price is kept at its minimum to attract and encourage passengers and to generate demand. The case of IR is just opposite, where demand is several times higher than actual supply. So, the present dynamic price system is not justifiable for IR. It will be justifiable if it works in the opposite direction. For example, the initial price may be kept at its maximum and then it may decrease gradually as per availability of seats or berths. Those who want to secure their journey well in advance should pay higher.

2. Number of alternative channel of ticketing (like IRCTC) may be increased.

3. Different forms of price discrimination (if needed in future) may be implemented and tested first through these alternative channels.

4. Passengers may be allowed to choose seats/berths according to their preferences and priorities through alternative channels with some additional costs.

5. Patients (including orthopaedic ones) may be given some privileges of choosing seats/berths according to their priorities and preferences.

- **Overpopulation, Reproductive Freedom and Mothers' Well-being: a note in response to a message from Achim Wolf**

  09 November 2013

  Earlier this week I received a message (appears below) from Achim Wolf (of Germany) through my website as well as an email concerning one of the biggest problems of humankind – the issue of OVERPOPULATION. Many thanks for inviting me to contribute on the issue.

  Certainly I realise the importance of such an issue and I do also believe that: "The flourishing of human life and cultures is compatible with a substantial decrease of the human population. The flourishing of nonhuman life requires such a decrease." [This is the fourth principle of Deep Ecology/Please visit my page on Environmental Ethics.]

  Academically, I am working on an empirical approach to evaluate well-being condition of a mother with respect to her reproductive choice, performance and freedom. The framework allows us to witness and justify its interaction with externally set fertility reduction policies. So, although I believe in the need for fertility reduction, I do also recognise a mother's freedom in matters of reproduction. The reason behind my stand is simple. Like many or few, I perceive development as freedom … a process of expanding the real freedoms that people enjoy … . So, when I try to conceptualise well-being of a mother within the sphere of her reproductive life, I aim to view it through reproductive freedom.

In order to make my stand clear, I cite one example. Let us think of a condition, where resource and environmental conditions lead a government to take a major policy to limit the fertility at 2 (children per mother). Now, the immediate task of it is to check whether this standard matches with a mother's choice. If differs, we need to understand reasons behind such differences or disagreements. In such cases or particularly where a mother's ideal exceeds the standard set externally, we need supplementary policies with priority to make a mother aware of the resource and environmental conditions, etc. so that she motivates herself and brings necessary changes in her reproductive choices. Secondly, if choice of (say) all the mothers on this Earth matches with the standard set externally or does not exceed the said standard, we need to look at the actual fertility. If it is found that a mother would like to have less (2 as per the standard or less), but she has actually more (or is prone to have more in future), it surely implies violation of a mother's reproductive freedom. We need to understand forces behind such a violation and we need strong major policies to deal with it. I am just sketching roughly the workability of our framework and about how to deal with the issue of overpopulation.

Overpopulation is not always driven by desire of a mother. According to a preliminary assessment of DHS data of various years, 33.20 % mothers in Bangladesh (2007), 20.37 % in Brazil (1996), 10.53 % in Cambodia (2006), 19.46 % in Columbia (2005), 30.22 % in India (2006), 24.71 % in Jordan (2007), 7.05 % Kazakhstan (1999), 3.89 % in Mali (2006), 21.92 % in Nicaragua (2001), 25.17 % in Peru (2004), 12.52 % in South Africa (1998), and 3.84 % in Ukraine (2007) feel lack of reproductive freedom. According to JGSS 2008, the figure for Japan is 8.71 %. If we look at the State wise findings in India, the figure is the highest in Uttar Pradesh (41.16 %) and the lowest in Mizoram (4.14 %). These results are obtained without imposing any external condition or standard as mentioned above. In such a situation, before formulating any drastic policy on fertility reduction, we must understand about why these mothers feel lack of reproductive freedom (i.e., why such mothers are forced to have more children than they do desire?).

If we introduce the external condition of 2 children per mother as standard, in addition to certain fractions of the above, 7.12 % mothers in Bangladesh (2007), 10.39 % in Brazil (1996), 17.69 % in Cambodia (2006), 7.65 % in Columbia (2005), 11.71 % in India (2006), 14.98 % in Japan (2008), 25.47 % in Jordan (2007), 9.07 % in Kazakhstan (1999), 21.05 % in Mali (2006), 13.10 % in Nicaragua (2001), 7.13 % in Peru (2004), 11.36 % in South Africa (1998), and 2.73 % in Ukraine (2007) clearly contribute to overpopulation enjoying reproductive freedom. We need to understand the reasons behind experiencing such a situation and consequently formulate appropriate policies, which should of course remain free from any coercion from the point of view of the interest of the mothers.

There are many issues to discuss with Achim Wolf (in the context of the following message) for mutual benefit (for greater common good as well) and particularly for enriching myself in return. However, considering the importance of the issue and the historical perspective of such an urge, I add the following message in my website, which I received from him with a link seeking support from us.

The message from Achim Wolf : *The German physicist, aerospace physician, writer and television presenter Heinz Haber wrote in 1973 that a planet the size of our Earth should not be populated with more than 500 million human beings in order to maintain a harmonious balance between human beings and nature. Today (June 2013) we have, with (officially listed) 7.2 billion human beings, reached more than 14 times this guideline value, and an end of this population growth is not in sight! A huge mass of unemployment and the collapse of our prosperity will be further consequences. A worldwide, mandatory birth control for all countries of Earth is urgent, if we want the impending climate catastrophe to weaken somewhat.*

Even the UN IPCC has recognised the danger in its fifth World Climate Report, but played it down by only predicting a higher sea level rise than previously prognosticated. The world however is in store for an unprecedented climate catastrophe which will bring us human beings - even in Europe! - primeval conditions. According to a current campaign at the world's largest petition platform "change.org", the reasons for this are obvious, but are ignored and tabooed as a result of ignorance, cowardice and lust for might.

Quote from a proponent of the petition:

"The overpopulation of Earth is a huge disaster and shows the picture of an egoistical thinking human being who doesn't care the slightest bit about his/her environment and who has raised the fulfilment of his/her desires to be the supreme principle of his/her life. The quality of the future life of all human beings is inseparably connected with the state of nature. The unrestrained plundering, exploitation and the therewith accompanying destruction, devastation and poisoning of the soil, air and water, caused by the huge demand for foodstuffs and goods of all kind of a still explosively growing population, presents the human beings with unsolvable problems. Overpopulation is not a taboo word, rather the exact term for an excessive number of human beings brought about by an irrational and irresponsible procreation of children, and which nature can no longer cope with. There should only be as many human beings living in a country as it can also

sustain from its own resources. In addition the fauna and flora must also have enough space to expand in order to fulfil their vital functions in a good functioning ecosystem. This shows that all countries of Earth are overpopulated and need to do something about it. The control of the overpopulation does not mean that human beings have to leave, and it also has nothing to do with racism, but rather it demands of the human being, regardless of his/her colour, that a reasonable birth regulation must be strongly striven for and carried out for the benefit of all human beings and all life on our planet."

http://www.change.org/de/Petitionen/weltweite-geburtenregelungen-verbindlich-einf%C3%BChren-introduce-obligatory-worldwide-birth-controls

- **A study of examining consistency of inequality data in World Development Indicators: 2008-2012**

04 April 2013

Recently I have performed a consistency check of data on inequality available in WDI 2008-2012. The objectives of such an exercise are twofold: first, to understand the extent to which the squeezed distribution of income or consumption conforms to the reported Gini based on micro data; and second, to study the types of bias that may arise due to grouping, their magnitude and the methods of correction. The first attempt (by this author) was made in July 2010 with table 2.9 of WDI 2009. Ginis were computed using fractile (quintile) data following a standard measure and then compared the calculated Ginis with the ones reported in WDI. For a country, the difference between the two should be relatively small because the fractile data and the Gini must be consistent, and the error is basically the one that arises due to grouping (since we have just a few fractiles in WDI, and the Ginis are calculated from micro data). The derived results show exactly this to hold for all the countries with the exception of Liberia. The difference between the computed and reported values for Liberia has been 17.64 Gini points, which is quite absurd. As a straightforward measure, although crude, OLS method was applied to predict the appropriate Gini index, which came to be 37.94. The Bank was communicated accordingly and an erratum was published in April 2011 showing the original index value, 38.2. The OLS method of regression shows a 0.26 Gini-point underestimation.

It is desirable to do a consistency check of data, correcting the Ginis based on squeezed distributions for possible biases or errors. Although there is no consensus in literature in regard to types of bias, this study recognises three types of bias, two of which are certain (non-stochastic) when number of observations get reduced due to grouping. The remaining type of bias is distribution-specific. If the number of observations in micro data is known, extents of all types of bias can be measured directly or indirectly with an ease, and the said check may be performed. **This study, therefore, highlights the need for displaying number of observations in micro data in the table for Gini index in WDI**.

In line with the above, after doing a systematic exercise, it has been observed that the magnitude of all types of biases may be as extensive as 5 Gini points (if n ≥ 5000 in micro data). So, if we roughly assume 5 Gini points as a cut-off mark for bias, and do a consistency check (as mentioned in the first paragraph), a number of African (and Latin American) countries draw our attention. Further, as standard literature suggests a downward bias only due to grouping, the cases of positive bias

for Togo in 2010 and 2011 (with Denmark and Sweden in various years; the cases of Micronesia and Seychelles in 2010 are simply wrong entries) need further attention. As the WDI is a unique source of data on inequality, such an exercise will bring more transparency in its presentations.

- **The National Commission for Higher Education and Research Bill, 2010**

  31 March 2010

  I do appreciate the Ministry of Human Resource Development (India) for realising the need for an authority like "The National Commission for Higher Education and Research (NCHER)" and necessary preparation for enactment of the relevant bill in the Parliament. I do hope that the bill will be enacted successfully and will touch the hearts of the whole community of young Indians and go beyond ....

  Although I am not an expert in philosophy of education (I have miles to go....), I do see nothing unpleasant in centralisation of the processes governing education. In Tagore's writing we find education as a piece of diamond, which is the same everywhere in the Universe. If it is the same everywhere in the **UNIVERSE**, why should it differ across **UNIVERSITIES**? According to Hutchins, "Education implies teaching. Teaching implies knowledge. Knowledge is truth. The truth is everywhere the same. Hence education should be everywhere the same." We may extrapolate this spirit in all matters related to all possible dimensions of education and research in the present context. So, we have nothing to dissent towards centralisation of all relevant statutes, ordnances and regulations in matters related to education and research in the Country.

  I do appreciate the plan of maintaining a National Registry of persons eligible and qualified for appointment as Vice Chancellor or head of institution of national importance. In line with the same, I do realise too that there should be a central body for recruitment and promotion of teachers and researchers in the Universities / Institutes of the whole Country. The NCHER should administer such processes, which would help us to overcome all sorts of possible bias, delays, irregularities and inconsistencies in the process of recruitment and promotion, maintain eminence of the selectors as well as excellence of the selectees, and create a true Indian environment (**UNI**ty in di**VERSITY**) in the Universities and Institutes of higher learning and research in the Country.

- **A note on Gini index of Liberia in World Development Indicators 2009**

15 July 2010

Recently I have gone through the table 2.9 of the World Development Indicators 2009 (p. 72-75). I have a feeling that either the Gini index or the distribution of income or consumption of LIBERIA is inappropriate. By looking at the distribution of income or consumption, I feel that Gini coefficient of Liberia should be close to 38. I have estimated it exactly to be: 37.94.

I have made this brief note available here as well as in my page of "Alternative measures of inequality".

Response from the World Bank (20 July 2010)

Thank you very much for your Email. If I understand it correctly, your approach it is as follows: use the fractile data given in World Development Indicators to calculate the Gini coefficient, and then compare thus calculated Gini with the one reported by the World Bank in WDI. The difference between the two should be relatively small because the fractile values and the Gini must be consistent, and the error is basically one of rounding off (since you have just a few fractiles, and the Ginis are calculated from the micro data). Your results show exactly this to hold for all with the exception of Liberia.

Thus, your approach seems quite reasonable and accurate to me. I do not have Liberia micro data nor have I been involved in the compilation of the WDI table. I agree with you that the result ought to be checked and probably corrected. The discrepancy might have occurred if, for example, the Gini was calculated using all individual data, and quintiles (fractiles) were given with truncation (of say, top incomes). Unfortunately, I do not know people in the Africa department who might have done the calculations but will surely try to highlight this issue.

Thank you very much for your Email and check of data consistency.

- **Colleague's Corner**

17 July 2010

The new UGC regulations for College/University teachers for maintenance of standards in higher education, vide No. F. 3 - 1/2009 dated 28 June 2010 is available here.

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30 January 2010

Are you my Colleague? Do you work in Dinhata College? Do you need essential guidelines or formats in matters related to career advancement? Please click on the link below to have those. You will be prompted for username and password. In order to confine use of this section among my Colleagues only, I have made this restriction. For username and password contact me or write me to: amlan@amlan.co.in.

Please download the document here.

More Information

For more information please use the contact form or write me to: amlan@amlan.co.in.

Amazing Cooch Behar Palace at evening

News

It is 5th birthday (tithi) today of http://amlan.co.in, Saraswati Puja, 24 January 2015.

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http://amlan.co.in is published on the day of Saraswati Puja, 20 January 2010 at 05.00 PM IST.

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