

# *Project Remix*

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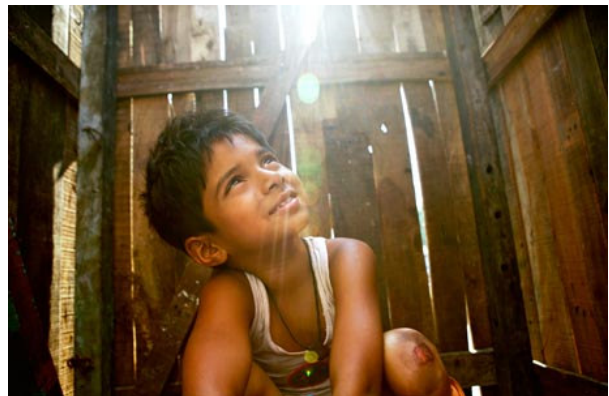


## *Slumdog Millionaire: Romance in(g) the Slums*

By Rekha Reddy

*Slumdog Millionaire* is the first movie I have ever considered walking out on. “Great” I thought, “this is going to be 2 hours of me watching the story of how some poor street kid’s life sucks”. I was far too quick to judge. Ironically, *Slumdog* turned out to be one of the most satisfying movies I have seen in a long time, although I was by no means enjoying myself while I watched it. While I left the theater feeling proud of myself for having fought back tears and extreme nausea at what I had just seen, I also felt oddly inspired and uplifted—and this confused me.

How is it that I could watch a movie that begins with a graphic torture scene and leave at the end feeling that same fuzzy cuddly feeling I get at the end of a romantic comedy? Well, maybe because against all odds, Jamal Malik’s story still has a happy ending. Jamal not only survives the slums, but his experiences living the hard-knock-life help him win India’s most popular game show. Ultimately however, he does not even care that he is suddenly 20 million rupees richer because he is finally reunited with his childhood sweetheart. The audience walks away feeling relieved that the characters all got what they deserved, money didn’t buy happiness, good triumphed over evil, and love conquered all. The choreographed dance number at the end was nice too.



There’s nothing wrong with enjoying a good love story and a fairytale ending, but I can’t help wondering if it’s irresponsible to reflect on a movie like this without acknowledging how craftily it romanticized

slum life and poverty. For example, it's easy to overlook how tragic it is that the Malik's brothers raise themselves by stealing food and living on the roof of a passenger train when you're distracted by scenes



fit for an “Incredible India” billboard and a catchy M.I.A. soundtrack blares in the background. And sure, it's quite entertaining to watch a gang of street kids out smart and out run the Indian police, but it's disheartening when you stop and realize that the reason the kids are being chased and threatened in the first place is because they're playing. Yes, they're playing on the Mumbai airport runway (again, also humorous in a twisted way), but these children live in a

world where they aren't guaranteed a safe place to play. And to think they were so excited when they got to the orphanage because there was a swing set and the promise of regular meals, only to be manipulated, enslaved, and mutilated. The heartache and horror was palpable as I watched the unwitting children audition to become “professionals”. I think the only way I recovered from the scene with the blinded boy was by focusing on the fact that “the 3 musketeers” escaped. Unfortunately, not every street child's story plays out as Jamal's does in Slumdog.

Given that I initially wanted to walk out of Slumdog because I thought it would be another rant about India's poverty problem, it's ironic that I find myself wishing it was less of a fairytale. While the movie certainly succeeds in entertaining, this success is predicated on glossing over a harsh truth for millions of humans living in extreme poverty. As a result, a movie that had the potential to speak on behalf of the voiceless millions in Dharavi is instead a convenient and trendy voyeuristic glimpse into their world. The audience isn't held accountable for what they have witnessed, and is free to walk away without realizing an important truth—happy endings are rare for children like Jamal. Is this to say that a budding romance in the setting of the Dharavi slums is a fantasy? Certainly not. But is a romanticized slum-life a fair representation of reality? Best ask a “slumdog” himself.

## ***Rural Unemployment: The Root Cause***

By Siddharth Gauba

*Slumdog Millionaire* takes us into a world we prefer not to think too much about. When confronted with the problems of poverty and urban squalor, we often simply shrug our shoulders and look at each other with an air of helplessness, as if there is no collective action we can take to tackle this problem. The truth is that while the problem looks vast and insurmountable on the surface, some basic root cause analysis leads to a crystal clear plan of action. In this two part series we will take on this issue. I have tackled the root cause



here in this article, while Amit has outlined our strategy to take action in his article titled “Project Remix: Team Rebuild”.

Despite efforts by many NGOs and urban agencies to provide relief and rehabilitation to the urban slums, progress is moderate at best. Shantytowns across India are increasing, and not decreasing in size. A recent report by the United Nations Development Programme (UNDP) found that while the proportion of urban poor in Indian cities has halved from 49% in 1973 to 25% in 2005, their numbers have increased from 60 million to 80 million. While the focus of movies like *Slumdog* is on urban cities, to find the root cause of the problem you have to shift your attention to the forgotten rural parts of India.

In India’s countless villages, there is often a lack of gainful employment. This has been an endemic problem since the beginning of the 20<sup>th</sup> century, when increasing industrialization resulted in the bitter



end of the once bustling village arts and crafts businesses, many of which in the 19<sup>th</sup> century catered to markets not only in India but across the world. The collapse of the old rural “business model” has wreaked havoc on the sustainability of many villages. As a result, seasonal farming during the harvest and planting seasons is the only remaining source of employment. The ever increasing modernization of farming technology has reduced the demand for labor even further. In these villages, making ends meet can become an extremely challenging proposition, leading to an urge to make it to “the city”, which is often viewed as a place with tremendous opportunity and money. Many have heard stories about someone’s nephew who has made it to the city and now sends enough money home. (This is not dissimilar to how many of us “poor” suburbanities have heard of an uncle or nephew who has hit it big in the stock market and now enjoys a cushy retirement!)

Alas, when they have made their way to their nearest mega-city like Mumbai or Delhi, they join the millions like themselves, living in conditions of squalor and pollution much worse than those they left behind. If lucky, some find work as laborers contracted on a day to day basis for construction, or for other similar occupations for which there is irregular and temporary demand. Many live on roads, under highways, or near railway tracks. Many wish to return to their village, but going back requires money, and, in many instances, the threats of a moneylender. Those who stick it out and survive can aspire to drive taxis, work as mechanics, or as domestic help, slowly gaining a toehold and maybe a shack. The fundamental cause of the migration to cities is clear: A lack of sustainable long-term demand for workers in rural areas.



Many people point to India's high growth rate across sectors such as manufacturing (averaging at 10%) and textiles (averaging at 22%) as evidence that the problem of rural unemployment will correct itself. Large scale industry, however, can only be a part of the equation. India has 638,365 villages, and it is not possible to have a car plant or a clothing factory near each one of them. The answer must lie in smaller but scalable solutions. One of the most famous examples of such a solution is the Amul Corporation. This corporation has a unique shareholder structure – it is owned by 2.6 million farmers. It was started as a co-operative society of farmers who were faced with undependable income from their buffaloes: In the summer, there was spoilage on the journey to the nearest town, and in the winter, buffaloes doubled their milk output, causing a depression in prices.

The success story of Amul provides insights into the salient features that are a necessary part of any long-term solution to the problem of rural unemployment. Farmers formed unions at the village and district levels, pooling their resources to set up small pasteurization and processing plants. Marketing and distribution was done by these farmer unions, in order to eliminate rent-seeking middlemen, and profits were distributed amongst the farmers based on their contribution of milk. As the movement developed and the unions acquired more resources, product ranges were expanded, with surplus milk converted to butter, powdered milk, and condensed milk, which had much longer shelf-lives and could be distributed nationwide. Today Amul is India's largest food products brand and has a turnover of \$1.05 billion, with a milk collection average of 10 million liters/day from 2.6 million contributors. This has created many sustainable jobs in village economies, starting with jobs in cattle farms to those in milk collection, processing and distribution. Farmers in many other states have replicated this model, transforming India from a nation often plagued with milk shortages to a net exporter and largest producer of milk and milk products in the world.



While Amul is perhaps the most famous example of a rural success story, it is not alone. Recently, entrepreneurs, feeding off the growth in the services sector, have tapped into the potential of rural youth by setting up rural business centers, where youths can be provided with the necessary training and then employed to provide services to local villages, by companies or banks desiring to tap into the rural population at low cost. By pooling economic resources together and searching out these entrepreneurs in need of start up capital, we can begin to start the process of responsible capitalism in India. If this has piqued your interest, look for articles in upcoming editions of Project Remix detailing various small business investment opportunities in India! In the meantime, there are some other basic requirements that need to be fulfilled in order to promote the development of sustainable employment in rural areas. Catch the article “Project Remix: Team Rebuild” below to learn what we plan to do about it!

# *Project Remix: Team Rebuild*

By Amit Bapat

It is often said that the two most fundamental requirements for entrepreneurship are:

- 1) a stable government
- 2) a set of enforceable property rights.

This appears logical; without these two things investors will not commit capital, and without start up capital, a business cannot develop. While this analysis is accurate, it assumes that basic needs like food, shelter, and clean water have been accounted for. Indeed, a stable government could establish enforceable property rights and still preside over a derelict village which is not attractive to investors. The success of rural industrial endeavors such as Amul is predicated on the existence of basic infrastructure. According to the World Health Organization, in 2008, 14% of the rural population did not have access to clean water, while a staggering 82% of the rural population did not have access to clean sanitation. Without developing this basic infrastructure, rural industries cannot develop, and as Siddharth so eloquently presented in his article, without rural industry, overcrowding in urban centers will continue, causing the problems highlighted in *Slumdog Millionaire* to continue to fester.



By now you might be asking “What relevance does this have to my life, 9000 miles away?” It is relevant because it provides our generation with a unique opportunity. For many of us, our primary connection with India has been through our extended family (cousins, grandparents, etc). As we begin to establish our familial networks here in the United States, we will need to develop new purpose to remain engaged with our cultural roots. What better purpose than to invest in developing the basic infrastructure that will become the foundation for improving living conditions of India’s urban poor?

How do we take advantage of this opportunity? Here at Project Remix we are looking to put together a Rebuild Team that will implement a multi-phase plan of attack. Phase I will leverage already existing organizations that aim to improve infrastructure in rural areas. These organizations need to raise money, and by combining our generation’s passion and energy with our parents’ generation’s vast economic resource base, we can help to raise and provide these funds. One of the main concerns about donating money is related to the actual use of the funds. In Phase I, Team Rebuild will create a database of organizations that are looking to raise funds, and will only raise funds for organizations who are sponsoring specific projects. Team Rebuild will track the progress of these projects and post results as they are completed. Phase II will transition the ad-hoc nature of our Phase I fundraising efforts into formalized high school organizations, by which teenagers will be able to spearhead fundraising efforts. These formalized Team Rebuild chapters will give high school students invaluable experience in

community organizing and project planning, bolstering their minds and their resumes. Phase III will take Team Rebuild to the next level by specifically implementing rural infrastructure projects of our own.

Who knows, one day, years from now, another movie might be up for an Oscar, the story of a few plucky 20 somethings who put their heads together and overcame adversity to overhaul India's rural infrastructure....*Suburban Millionaires* perhaps?

## ***Introducing....The Networking Stack*** By Nikhil Vaze

Welcome one and welcome all to the networking stack. I know, the name is a bit weird but I'll get to that in a moment. First, I'd like to explain what this column will be about and how it came together.

Late last year, I was trying to organize a youth networking event. The hope was to bring together young working professionals and college/high school students into one room and talk about different professions. There would be presentations, where speakers would talk about why their field or vocation was exciting and explain how others could join their industry. There would be a chance to mingle at the end along with a question and answer session. I had it all planned out...except for logistics.

I ran into a paradox. The same achievements and accomplishments that allowed speakers to present in front of our community also prevented them from gathering in one location at a common date and time because everyone was so busy. To get around this problem, I resolved to write a column where I would interview people from various professions and to give you, the readers, a chance to peak inside their world. To me, this seems to be the ideal compromise.

I think everyone stands to benefit from learning about what other people do at work, how they ended up in their current field and where they see themselves in the future. I'm going to gear this column to high school seniors, college students and young professionals who want to learn about the career paths that others have taken.

So, I hope to come back next time with an actual interview and I trust that you'll come back to read. Oh and before I forget, the name of this column has a double meaning. The first is a reference to the computer science term which refers to the software that allows a computer (or device) to talk to other computers. The second is what I hope this column will eventually achieve – a stack of articles for people to read through and network.

# *Santonio Holmes Hates the NFL Overtime Rule And So Should You*

By Gautham Shridharan

On February 1, 2009, we all experienced another thrilling Superbowl with a spectacular finish. While there was no hype of a 18-0 team attempting to make history as there was last year by the legendary 2008 New England Patriots, this year's Superbowl still had the elements to place it among the greatest. The Steelers enjoyed a 20-7 lead going into the fourth quarter, and seemingly collapsed while they allowed the Cardinals to score 16 unanswered points, 6 of which came from a 64 yard touchdown pass to Larry Fitzgerald (Shouldn't they have quadruple teamed him?). Hats of to Kurt Warner, who in his third Superbowl appearance, engineered what was almost a historic fourth quarter comeback.



Not to be outdone, Big Ben and the Steeler offense stormed back with their well planned and executed two-minute drill, which culminated with a glorious 6 yard touchdown reception by Santonio Holmes as he barely got both feet in bounds with only seconds left on the clock. The Steelers successfully protected the lead for a victory and are now the proud owners of the largest collection of Lombardi trophies in the NFL. What a great ending to a thrilling game. It was a contest of two evenly matched teams, and the victor was fairly decided after 60 minutes of hard-hitting, physical football.

I went home thinking that night, 'That was an awesome game; thank God it did not get ruined by going into overtime'. Yes, how awful that would have been, if a matchup like that had to be decided by a rule as ridiculous as the NFL overtime rule. In fact, the more I thought about it, the more infuriated I became, because I was in fact thinking about the most ridiculous rule in all of sports. There are certain things that can be the subject of debate, but the NFL's overtime rule is not one of them. I will show with a very crude mathematical model that it is fundamentally flawed:

Let's assume the following givens:

$p$  = the probability of team A scoring on a given drive

$q$  = the probability of team A stopping team B on a given drive.

$1-q$  = the probability of team B scoring on a given drive.

$1-p$  = the probability of team B stopping Team A on a given drive.

Recall from conditional probability that if we have two independent events F and G, the probability of F AND G occurring is found by multiplying the individual probabilities  $P(F)$  and  $P(G)$ . Additionally, the probability of F or G occurring is the sum of the two individual probabilities. We can use these principles to determine expressions for the probabilities of both A and B winning in overtime. Let us start with team A. By definition, the probability of team A scoring on the first drive (remember, team A won the toss) is

p. If they do not score on their first drive (probability 1-p), they could still win by subsequently stopping Team B's ensuing drive (probability q), and then scoring on the third drive of overtime (probability p). This is summarized as:

$$P(\text{A scoring on 3rd drive}) = (1 - p)(q)(p)$$

but even if Team A doesn't score on the 3rd drive, they might be able to win by stopping Team B again and then scoring on the 5th drive, and so on. By adding these probabilities (of Team A scoring on the first, third, fifth, etc) you get the following geometric series:

$$P(A_{win}) = p[1 + q(1 - p) + q^2(1 - p)^2 + q^3(1 - p)^3 \dots]$$

because this geometric series has a product less than unity, we can simplify the expression to

$$P(A_{win}) = \frac{p}{1 - q + pq}$$

Because there are only two possible outcomes to the game (note that we ignore the possibility of a tie at the end of 15 minutes of play),

$$P(B_{win}) = 1 - P(A_{win})$$

and thus:

$$P(B_{win}) = 1 - P(A_{win}) = 1 - \frac{p}{1 - q + pq} = \frac{1 - q + pq - p}{1 - q + pq}$$

Now we have expressions for the probabilities of both teams winning. Since the teams have ended up in overtime, we can say that at least in this particular game, the two teams must be of very similar skill and that the probability of the two teams scoring on a given drive is roughly equal. Formally stated, this assumption reads:

$$p = 1 - q$$

Substituting this fact into our equation for  $P(A_{win})$  yields the following result:

$$P(A_{win}) = \frac{p}{1 - (1 - p) + p(1 - p)} = \frac{p}{2p - p^2} = \frac{1}{2 - p}$$

So we now have an expression for the probability of Team A winning the game based solely on the probability of Team A scoring on the first drive (which they so graciously earned through a coin-flip). For the rule to be fair, Team B should have an equal shot at winning the game as team A, and thus the  $P(A_{win})$  should equal 0.5. Setting the above equation to 0.5 and solving for p, we find that  $p = 0.001$  (technically, p would have to equal 0, but we'll go with 0.001 and accept at 50.03% chance as being "fair" for sake of argument). What this means is that in order for the NFL overtime rule to be fair, both offenses playing in the game must have a 1/10 of one percent chance of scoring on any given drive (remember we assumed the offenses of both teams to be equally skilled by saying  $p = 1 - q$ ) We all know

that this is beyond ridiculous in today's day and age. To the NFL's credit, when the rule was first devised in 1974, the overtime statistics were less skewed. In fact, if we take all the data since 1974, the coin-toss victor has gone on to win the game only 53% of the time, which implies that since the rule's inception, the probability of an NFL offense scoring on a given drive is 11%. Times are changing. Offenses are improving, and field goal kickers are stronger and more accurate. I think we can all agree that a modern NFL offense has a greater than 1/10 of one percent chance of scoring on a given drive (unfortunately, the actual statistic is a little bit difficult to get at; look for an update once I obtain it). The NFL overtime rule should change with the changing times.

For those who have been in favor of the current NFL overtime rule, I hope I have been able to convince you otherwise with cold, hard, logic. You are probably now thinking, "while this is all good and well,



When did Santonio Holmes say he hates the rule?" He expressed his disdain for the rule on the last drive when he was thrown that 6-yard touchdown pass. As the ball sailed over three Cardinal defenders and his body twisted in the air, he thought to himself "Jeff Reed, I love you bro...but Gautham proved to me that the overtime rule is a piece of garbage. I'm going to make one of the most ridiculously clutch catches in the superbowl's history and end this right here, right now." And so he did.