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NEXT STEP

CIVIL ENGINEER WHAT?

"So what's your major?"

"Civil Engineering"

"Oh. So you're like a construction worker, right?"

"No. It concerns—"

"OH WAIT, YOU'RE A FANCY ARCHITECT!"

There are some degrees out there that simply tend to be misinterpreted and misunderstood by the people around you and regardless of its existence since the dawn of civilisation itself, Civil Engineering happens to be one such field. The most common confusion that happens here in Bangladesh is probably between a plumber and a civil engineer, but architects and construction workers are right up the alley too.

So what exactly is Civil Engineering? And how is it any different from the study of architecture?

According to Wikipedia, Civil Engineering is a professional engineering discipline that deals with the design, construction, and maintenance of the physical and naturally built environment, including works like roads, bridges,



canals, dams, and buildings. My father happens to be a civil engineer and when I asked him about the difference between an architect and a civil engineer, he said that architects design the building, whereas a civil engineer designs the site. If a building were to be a human body, the civil engineer would be in charge of the skeleton while the architect would deal with the aesthetic appearance. So basically, any sort of infrastructure design, development or construction would require civil engineers.

So apart from buildings, do you just build bridges? Is that it?

"I mean sure try and get across your rivers without us. Let's see if making apps on

Android help you there," says Muin Ahmed Alif, currently enrolled in University of British Columbia. "Students in other Engineering streams tend to think our job is easy, which it clearly isn't. I mean seriously, try designing a sewage system for Dhaka populated by 6.97 million people producing the amount of faeces everyday, which is enough to make up an island the size of Hawaii in a month."

Well, you can't blame them for being so offended, because it turns out that Civil Engineering programs diversify into a range of different specialised fields. Structural design, Geotechnical Engineering, Water Resource Management, Seismic Design and Fluid Mechanics are

only a few of the many fields available. So it's safe to say that your average civil engineer is not only concerned about sewage lines and bridges.

Now that you don't think of civil engineering as a lame field anymore, what are the prospects of it in Bangladesh as well as abroad?

Needless to say, very few universities offer Civil Engineering in Bangladesh, BUET being undoubtedly the best of them. Other institutions tend to lack the technology and funding to offer its students the research and academic facilities as well as the plethora of options they can choose to focus on. In terms of employment, very few BUET graduates stay back in the country after graduation and those who do either apply for government engineering jobs or university faculties.

For a field of study that requires a lot of technological and research facilities, it is obvious that studying abroad provides greater opportunities. Apart from these, foreign programs have Co-op program placements that connect the students to the job markets before graduation, which is similar to summer internship programs. After graduation, every engineering student needs to be in an "Engineer in Training" status under a professional Engineer, in order to become a practicing Engineer and gain their P. Eng certification.

So next time you want to throw a joke at someone who's studying Civil Engineering, think again. Think civil.

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Civil engineering top careers

So you study civil engineering. Now what? What should you specialise in? Where do you work?

CIVIL ENGINEERING BRANCHES

In general, civil engineering is concerned with the overall interface of human created fixed projects with the greater world. General civil engineers work closely with surveyors and specialised civil engineers to design grading, drainage, pavement, water supply, sewer service, dams, electric and communications supply. To elaborate, sub-disciplines or specialisations include:

- Materials science and engineering
- Coastal engineering
- Construction engineering
- Earthquake engineering
- Environmental engineering
- Geo-technical engineering
- Water resources engineering
- Structural engineering
- Surveying
- Transportation engineering
- Forensic engineering
- Municipal or urban engineering
- Control engineering

TOP CAREERS INTERNATIONALLY

Top careers abroad are geo-technical engineers, structural engineer, hydro-technical specialist, transportation system developer, construction manager, environmental engineer, mining, and roads and highway. The highest paid and most in-demand careers are in structural engineering and mining.

Top companies that employ civil engineers include the likes of Shell, AECOM, Kiewit Corporation, and Imperial Oil.

TOP CAREERS IN BANGLADESH

Civil engineers can pave a successful career for themselves in both governmental and private organisations. Top government jobs are in the Public Works Department, Roads and Highways Department, Railway, Public Health Engineering, Local Government Engineering Department, and public sector banks.

There are great career opportunities in private sector banks, as well as the World Bank, and the Asian Development as Procurement Specialists. And needless to say, real estate is another sector with plenty of opportunities and scope for career growth for civil engineers in Bangladesh.

LIGHTCASTLE PARTNERS RANK BANGLADESH'S BUSINESS CONFIDENCE INDEX

Bangladesh's Business Confidence Index (BCI) has been found to be 39 on a scale of 100—implying between low and moderate—according to a recent study conducted by LightCastle Partners, a premier consulting firm.

The report was launched yesterday at The Daily Star, Strategic Partner of this initiative. Mamun Rashid, Managing Partner, PwC Bangladesh; Niaz Rahim, Group Director, Rahimafrooz; and Masruur Reaz, Program Manager, Trade & Competitiveness, IFC Bangladesh, spoke at the event.

The goal of the report is to quantify the prevalent business sentiments lending voice to the private sector business community, by aggregating their views in the form of a report. And this index is particularly interesting in the context of our country's shift towards a middle income status.

The study aims to understand the factors that influence the business ecosystem through a collection of facts, figures and opinions of our business community. It presents the status quo, identifies the challenges confronting growth and recommends action items to lever up the index in the coming years.

METHODOLOGY

The Harmonised Expectation Indicator (HEI) method was used to process the index score. This factors in performance reviews for the foregone year, current situation and expectations for the upcoming year. Firm level representation was carefully selected to be reflective of the respective industries. Industry representation was organised to be proportional to their respective contribution to GDP. All surveys were fielded in June-July, 2016.

IMPACT OF THE STUDY

Bangladesh's remarkable private sector growth over time has brought into limelight the significance of having a confidence index that plays an important role in investors' decision making framework for foraying new sectors or expanding existing ones. The BCI can potentially indicate conditions of current business environment, which will provide further clarity for both domestic and foreign investors.

This will also serve as a manual for the business leaders to understand the underlying economic challenges and opportunities. With superior access to information, they can sim-



LightCastle Management Team along with Mamun Rashid, Managing Partner, PwC Bangladesh; Niaz Rahim, Group Director, Rahimafrooz; Masruur Economist, Trade & Competitiveness, Global Practice, World Bank Group; and Tajdin Hassan, Head of Marketing, The Daily Star, unveiled the study LightCastle Business Confidence Index 2016.

plify their decision making process, plan better and execute timely to increase their foothold in their respective markets. Finally, the report will draw attention of the policy makers to put more effort and resources into the most pressing areas as determined by the business leaders.

KEY INSIGHTS

The sectors that have scored highly include Information Technology (92%), followed by Healthcare (67%), RMG (63%) and Financial Institutions (56%). Industry leaders have cited incremental growth in the export of high-value products, recent political stability and an increase in purchasing power as the main driving factors behind their positive outlooks. 41% of the respondents have higher export

expectations in the coming year thanks to the recent infrastructures development, while 43% opine export figures will remain unchanged due to power & gas shortages and inefficiencies in port management. In fact, 100% of the respondents cited energy shortages as a major deterrent to optimism.

96% of the business leaders feel that there's a big skills gap in their workforce. Respondents feel that a stronger recruitment pipeline from universities, heavier investment on training and retaining workers and better education systems are required to solve this critical problem. More than 72% of the industry leaders feel confident that they will be able to create more employment for the youth if the above tactics are effectively put into place.

Connecting academic research to commercial applications came up as strong recommendation from the business leaders. Many academic institutions are conducting cutting edge research across various sectors, noticeably in renewable energy and agriculture. However, many respondents complained that these R&D efforts often fail to reach the hands that could apply these concepts at scale. If universities and the private sector partner more often, then it could be a potential win-win situation for both parties. Universities will get more opportunities to finance their research while employers can apply these findings and simultaneously make deeper inroads in the recruitment pipeline.

The major problem areas cited by the

industry leaders are employee incompetency (96%), absence of standardisation of regulatory bodies (73%), inefficient logistics (61%) and financing constraints (53%). Perhaps these sentiments can be best summed up in the words of one of the respondents, who said, "The optimism comes more due to the absence of darkness, rather than the presence of light."

Industries that are deemed as the highest growth opportunities in the coming decade are: Power & Gas, Information Technology & Ready Made Garments.

CONCLUSION

Industry leaders are not overwhelmingly optimistic regarding the economic performance for the coming year. However, they are not completely cynical either. They feel the optimism will increase if the following are considered:

- Prioritising political stability and security;
- Facilitating domestic and foreign investment in the manufacturing sector;
- Increasing rewards and recognition in tax payments;
- Incentives for export once domestic demand is met;
- Greater connection between academic research with commercial applications.

Our country is at a crucial juncture where we can capitalise on the demographic dividend and strategic geographical position to become the next Asian Tiger. Therefore, identifying and analysing patterns in the macro-economy, taking the perspectives of business leaders over multiple periods will equip us with superior information, eventually leading to new avenues of opportunities in Bangladesh.

To learn more about the industry specific insights, you can download the report for free from LightCastle's report portal at:

www.lightcastledata.com/drive

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