

**For discussion  
on 28 February 2012**

**Legislative Council  
Panel on Development**

**Further Investment in Construction Manpower**

**PURPOSE**

This paper reports to Members recent initiatives in boosting manpower supply in the construction industry, particularly upon Finance Committee's approval of \$100 million in May 2010, and seeks Members' early views on a proposal to provide another one-off grant of \$220 million to further enhance such efforts in order to meet the manpower needs of future infrastructure projects.

**OVERALL PUBLIC WORKS PROGRAMME**

2. At the beginning of the third term of the Hong Kong Special Administrative Region Government, the Chief Executive outlined in his 2007-08 Policy Address the strategy of promoting economic growth through infrastructural development, thereby creating employment opportunities and enhancing the long-term competitiveness of Hong Kong. For this purpose, we have rolled out an infrastructure programme comprising not only the Ten Major Infrastructure Projects but also social and community projects as well as minor works items and building maintenance under the "Operation Building Bright".

3. Over the past few years, good progress and noticeable results have been made. Government expenditure on capital works has risen from \$20.5 billion in 2007-08 to an estimated \$62.3 billion in 2012-13. It is expected to reach over \$70 billion per year in the next few years. A chart showing the overall Government expenditure on capital works programme from 2001-02 to 2012-13 is at **Annex 1**.

## **CONSTRUCTION MANPOWER SITUATION**

4. Benefited from the public works programme, the unemployment rate of the construction sector fell substantially from the post-tsunami peak of 12.8% in February to April 2009 to a low level of 5.2% in October to December 2011 as shown in a chart at **Annex 2**. According to the Census and Statistics Department, the median wage of workers has increased from the post-tsunami trough of \$9,000 to \$11,000 recently and since early/mid 2011, the composite labour wages of civil engineering and building contracts have surged by about 9% to 10% yearly as compared with the more modest 3% to 4% before that as shown in **Annex 3**. All these reflect the increasingly tight labour situation and the sustained high level of workload will likely further stretch the construction labour market.

5. To ensure the smooth, effective and timely delivery of the above mentioned infrastructure programme, it is imperative to nurture and retain an adequate, skilled workforce that is capable of delivering high quality construction.

6. According to information provided by the Construction Workers Registration Authority (CWRA) in end December 2011, of the about 287 000 registered construction workers, about 40% are aged over 50 whereas only about 6% is below the age of 25. Their age profile is at **Annex 4**. In terms of skill level, about 60% have registered as general workers without any trade skills. This is compounded with skills mismatch problem when increasing proportion of projects would be infrastructure development in coming few years whereas building construction used to dominate. These two key manpower challenges i.e. acute ageing and skills mismatch, are confirmed by a study<sup>1</sup> commissioned by the Construction Industry Council (CIC).

## **ENHANCEMENT OF CONSTRUCTION MANPOWER**

7. To avoid the manpower situation from worsening which would affect the delivery of infrastructure projects in terms of “on time” and “within budget” objectives, we have taken early action to enhance the local construction manpower by

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<sup>1</sup> CIC commissioned CityU Professional Services Limited in 2008 to study the manpower situation for construction workers, supervisors and technicians. The study which was substantially completed in 2009 revealed that the anticipated minor shortage at supervisor / technician level would be manageable and notwithstanding that construction workers would be adequate in head count, individual trades might face labour shortage and / or ageing.

training more skilled workers and attracting more people to join the industry through a multi-pronged approach. Measures adopted include strengthening CIC's training and trade-testing functions, enhancing promotion and publicity, improving working conditions in construction sites, and exploring possible means to reduce manpower demand with research and development. We sought approval of the Finance Committee of the Legislative Council on 28 May 2010 for a commitment of \$100 million to support some of these initiatives. Details are set out in ensuing paragraphs.

*Strengthening the training and trade-testing functions of CIC*

8. Not less than \$80 million of the above mentioned \$100 million grant is earmarked for reimbursing CIC of training allowances and trade testing and course fees benefiting trainees and workers. With this funding availability, CIC has, since September 2010, been implementing in phases various training and trade-testing initiatives, the description and progress of which are set out in **Annex 5**. These initiatives have started to deliver results. Amongst them, the Enhanced Construction Manpower Training Scheme (ECMTS)<sup>2</sup> has attracted 935 trainees (excluding 180 drop-out) up to January 2012, and about 60% are aged below 35 and many are new entrants. For the Enhanced Construction Supervisor / Technician Training Scheme (ECSTS)<sup>3</sup>, due to contractors' strong views that the proposed duration of nine months is too short to equip a trainee with sufficient knowledge and experience to assume supervisory position after graduation, CIC has reviewed and agreed with the industry stakeholders on the course duration, content and details. The Scheme is now ready to be rolled out in early 2012.

9. Nevertheless, attributed largely to the demanding and unpleasant nature of construction works, it is not uncommon that trainees would drop-out half-way through the training courses. Even after completion of training, some of them failed the trade tests. For those who had acquired the trade qualifications, some chose not to enter or stay in the industry. The overall wastage rate is about 16%.

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<sup>2</sup> ECMTS is the major initiative under the approved funding. With the funding, the training allowance has been increased to about \$5,000 per month for about 3 000 trainees to attend the training courses of selected trades for acquiring the required skills and obtaining the registration qualification as semi-skilled workers.

<sup>3</sup> ECSTS is the second key initiative supported under the approved \$100 million funding to increase the training allowance to \$150 per day for about 600 trainees to attend the training courses for becoming construction supervisors/technicians.

### *Promotion and Publicity Activities*

10. Of the approved commitment of \$100 million, up to \$20 million is earmarked for enhancing promotion and publicity activities to uplift the construction industry's image with a view to attracting more people to the industry. Since May 2011, we have rolled out a 3-year intensive publicity campaign, "Build Up Publicity Campaign", through various media channels. With more construction information publicised and the public interest in the industry raised with its better economic outlook and prospect, we are encouraged by the increase in the construction labour force, which now stands at 300 000, the highest record in five years. As revealed from a recent survey, the general public also had slightly more positive perception of the construction industry after the Campaign launch.

11. To keep up the momentum, we are planning to roll out another series of publicity activities through both the traditional media (e.g. TV and radio programmes, newspapers) and the social media (e.g. Apps and on-line website) to reach out to more young people as well as in-service workers, especially general workers for skills upgrading. Other than organising publicity programmes, we have provided seed money of \$6 million (out of the earmarked funding of \$20 million) for CIC to set up a Resource Centre as a one-stop platform where job seekers can access to job and training opportunities and other construction related information. The Centre will come into operation in February 2012. A summary of the publicity activities is at **Annex 6**.

### *Improving the Working Conditions in Construction Sites*

12. One of the challenges in attracting new blood to the industry is that the working conditions are often perceived as dangerous and unpleasant. In a bid to improve the practice of the construction industry, the Government is stipulating provisions in public works contracts requiring contractors to implement measures to improve the site operating environment, enhance construction site safety, and uplift site cleanliness and tidiness.

13. We have required contractors of public works contracts to provide uniform for site personnel. To promote a good image with this site uniform initiative, CIC has, in collaboration with the labour union, trade association and the Development Bureau (DEVB), developed the industry uniform. On site operating environment, to complement the implementation of the uniform initiative, we will be

providing additional welfare facilities on site for workers, such as individual storage compartments, showering facilities, rest areas etc. in public works contracts.

14. On the safety front, with the safety measures taken over the years, the industry's accident rate has dropped substantially from 114.6 (per 1 000 workers) in 2001 by about 50% to 52.1 in 2010, and the corresponding rate for public works contracts from 34.7 by about 70% to 9.8. That said, the year 2011 has recorded 23 fatal incidents which is a cause for major concern. We are drawing up enhanced measures to improve site safety in public works projects, which will include an enhanced merit and demerit system for the safety performance of contractors, enhanced measures for nurturing the safety behaviour of workers and enhanced promotional and training efforts. On site cleanliness and tidiness, we will require contractors' supervisory staff to conduct daily inspections, and arrange the works departments' safety and environmental advisors to carry out random and independent audit.

#### *Reduce Manpower Demand through Research and Development*

15. The local construction industry is labour-intensive and involves extensive variety of trades on site. We have reviewed the code of practice to simplify design detailing of reinforcement bars to expedite their fixing process. However, overseas experiences indicate that advancement of technology will help enhance productivity and improve quality through innovation.

16. We have been working closely with CIC to set clear objectives, directions and priorities for local construction research and development (R&D) activities. We will focus on R&D efforts to review the design and construction practices including mechanization and prefabrication with a view to reducing manpower demand for trades with anticipated shortages. We are also working to develop procurement approaches to promote construction methods with more mechanization and prefabrication in the delivery of public works projects.

#### **FURTHER INVESTMENT IN CONSTRUCTION MANPOWER**

17. Looking ahead, public infrastructure programme will continue to be sustained at a high level and judging from the number of government sites sold, private sector construction will also pick up. This will further strain the increasingly

tight and buoyant labour market as mentioned in paragraphs 3 and 4 above. The wastage of trainees also suggests the diminished attractiveness of the present ECMTS facing the escalating wages. All these point to a need to review the adequacy of the training schemes and the funding support to them.

18. To tackle the manpower problem in a timely and effective manner, after the review as mentioned in ensuing paragraphs, the Financial Secretary announced in the 2012-13 Budget that another **\$220 million** is proposed to be earmarked to support CIC in enhancing manpower training. Specifically, we propose such further funding support to be used for enhancing the two key initiatives, namely ECMTS and ECSTS, by way of increasing their training quota, allowance and duration.

**(A) To increase the training quota, allowance and duration of the ECMTS**

*Training quota*

19. In June 2011, DEVB comprehensively reviewed the manpower situation and conducted a manpower workshop with key industry stakeholders<sup>4</sup>. We have reached a view that although there would be adequate construction workers in total head count over the next five years, individual trades would face skill shortage and/or ageing labour during this period. In addition, the existing workforce would see a projected shortfall in another 5-year period (around 2015 to 2020). Taking into account possible variations from the projection, the magnitude of replenishment of the retired before the launch of ECMTS, the wastage during and after training due to drop out and job changes, we will need to **increase the training quota to about 6 000** from the original target of 3 000.

*Training allowance*

20. There is a need to provide sufficient training allowance to attract trainees and help them meet economic needs over the training period having regard to the prevailing living costs and wage level. According to CIC's interview with the drop-out trainees of ECMTS, many of them have found a job with a wage much higher than the current training allowance of about \$5,000 per month. Taking into account the more demanding nature of construction works especially the ECMTS

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<sup>4</sup> The stakeholders include CIC, CWRA, major employers including MTR Corporation Ltd, the Real Estate Developers Association and the Housing Authority, trade associations and unions, training institutes and other government departments.

trades and our overriding need to attract a lot more new blood to deliver our massive capital works programme as reflected in the higher training quota in paragraph 19 above, we need to offer sufficiently attractive terms/incentives.

21. We consider it reasonable and realistic to set the training allowance at about **\$8,000 per month**<sup>5</sup> (an increase by about \$3,000 from \$5,000) on par with the non-skilled construction workers' median wages; this is higher than the median wage at \$6,000 of all sectors and should maintain the attractiveness of ECMTS. We will review the latest labour market situation to firm up the exact training allowance. To encourage trainees to complete their training, we will consider with CIC withholding part of the training allowance and releasing it only upon completion of training.

#### *Training duration*

22. While the estimated training duration of three months under the existing ECMTS represents the average duration of an adult short course provided by CIC prior to the selection of trades under ECMTS, experience in ECMTS indicates that the training duration of selected trades under ECMTS, which are naturally of higher skills, is mostly about four to six months. Hence, to meet the actual need, we propose that the average training duration should therefore be revised from about three months to about **five months**.

### **(B) To increase the training quota, allowance and duration of the ECSTS**

#### *Training Quota*

23. To maintain the level of works supervision and technical support, construction supervisors/technicians should be increased in line with workers. Adopting a similar percentage increase in worker trainees but different wastage rates, we propose to increase the training quota of construction supervisors/technicians from 600 by 400 to **1 000**.

#### *Training duration*

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<sup>5</sup> It is worth noted that instead of relying solely on our enhancement of the training allowances, the trade associations have also pledged to employ graduated workers at a higher wage to sustain their interest to remain in the industry, representing a partnership endeavour between the Government and the trade associations in action and a win-win situation to the three parties.

24. ECSTS is the only initiative that has not been implemented due to contractors' inputs as mentioned in paragraph 8 above. Consultation with industry stakeholders indicates that a duration of about **15 months** will be more appropriate to ensure that the trainees will have acquired sufficient classroom knowledge and on-site experience. CIC is already geared up to launch the new course with a duration of about 15 months once funding becomes available. We therefore propose to increase the duration accordingly to meet the industry demands.

### *Training allowance*

25. The current training allowance of about \$150 per day under ECSTS was originally set assuming that its 9-month training would follow the conventional classroom mode. However, the current proposed mode of ECSTS of 15 months comprising about initially 9-month classroom training and then 6-month site training has cast serious doubt on the attractiveness of the allowance to retain trainees for a much longer course. We consider that the training allowance of ECSTS should be enhanced to ensure its attractiveness.

26. With reference to the median wage of non-skilled workers of all industry sectors, which has increased from \$5,000 in end 2009 by 20% to about \$6,000 currently, we propose to increase the \$150 daily rate of training allowance of ECSTS fixed in end 2009 correspondingly by the same rate of 20% to **\$180<sup>4</sup>** over the initial 9-month classroom training period.

27. During the subsequent 6-month site training period, the trainees will actually work on site under the more demanding working environment and have to produce work output. This is on par with a job and should deserve an allowance at a level similar to the median wage of non-skilled workers of all industry sectors at about **\$6,000 per month<sup>5</sup>** currently. We will review the latest labour market situation to firm up the exact training allowance. Similar to ECMTS, we will consider with CIC withholding part of the training allowance and releasing it only upon completion of training to encourage trainees to complete their training.

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<sup>4</sup> The \$180 per day is equivalent to about \$4,300 per month for 24 training days a month, during the initial about 9-month classroom training period.

<sup>5</sup> The \$6,000 per month is equivalent to about \$250 per day for 24 training days a month during the subsequent 6-month site training period.



## FINANCIAL IMPLICATION

28. To support the proposal detailed under paragraphs 19 to 27 above, an additional funding of **\$220 million** as set out below will be required to cope with the proposed increase in training quota, allowances and duration of ECMTS and ECSTS. To maximize cost effectiveness, we propose that the two funds will be pooled together for better deployment and allocation across the proposed measures can be adjusted according to the prevailing market and manpower situation. Details of the enhanced measures now proposed as compared with the existing ones under the approved commitment of \$100 million are at **Annex 7**.

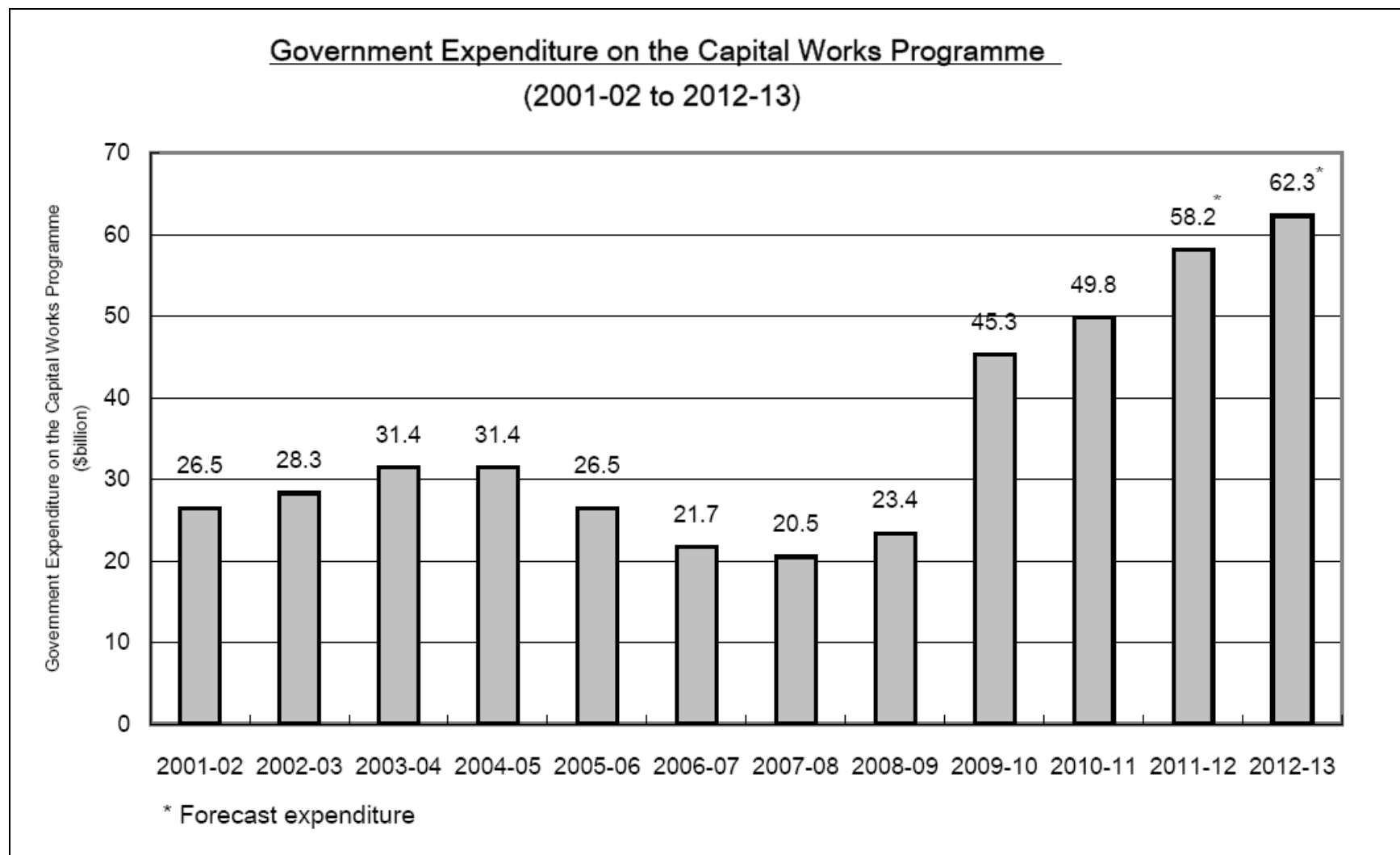
	<b>\$ million</b>
(i) Enhanced construction manpower training for selected trades	165
(ii) Enhanced construction supervisor / technician training	55
<b>Total</b>	<b>220</b>

29. While the proposal, if approved, will meet the construction industry's manpower demands up to 2020, we will closely monitor the manpower situation and replenish the workforce and promote wider use of technology to increase the productivity with a view to minimising any shortage proactively in the longer term.

## ADVICE SOUGHT

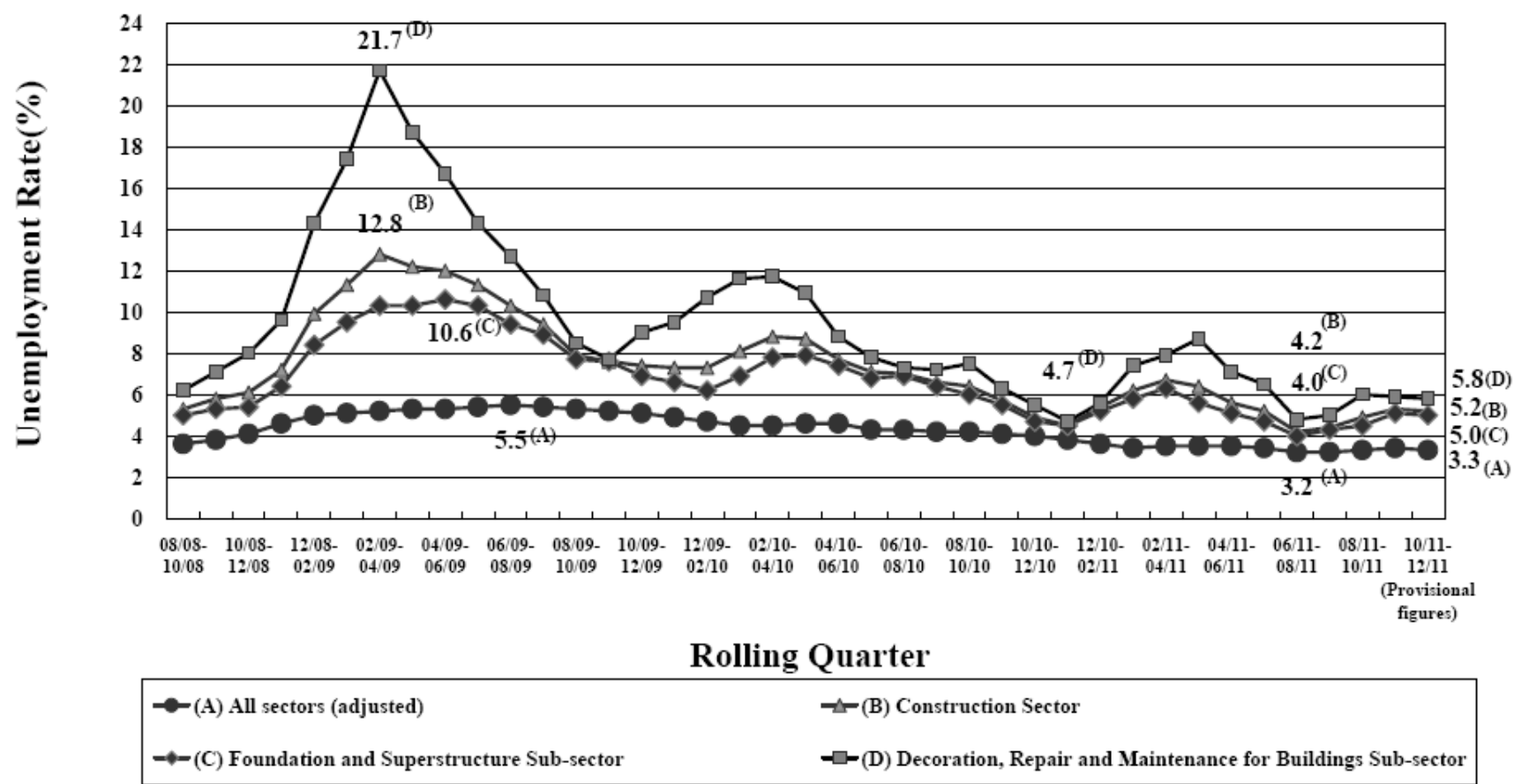
30. Members are invited to note the update on the situation of construction manpower and lend support to the proposal set out in paragraphs 19 to 28 above.

**Development Bureau**  
**February 2012**



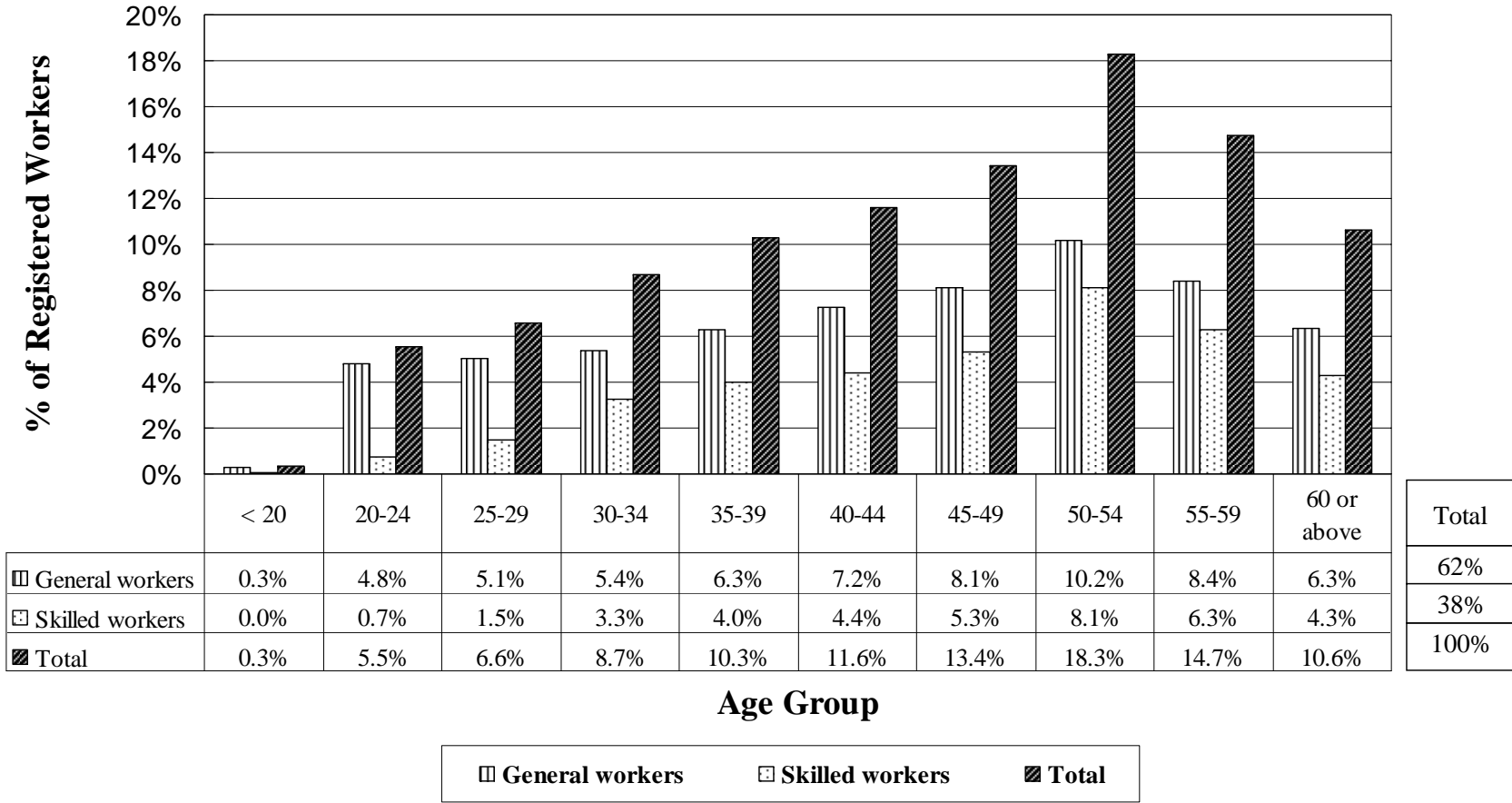
Note : For 2008-09, the expenditure does not include the one-off endowment of \$21.6 billion to the West Kowloon Cultural District Authority.

### Trend of Construction Unemployment Rate August - October 2008 to October - December 2011





**Demographics of Registered Construction Workers  
( as at 31 December 2011 )**



**Description and Progress as at 31 January 2012 of  
Training and Trade-testing Initiatives  
under the Approved \$100 million Funding**

**(i) Enhanced construction manpower training for selected trades**

Description

- Increase the training allowance to an average of about \$5,000 per month for trainees of selected trades under the Enhanced Construction Manpower Training Scheme (ECMTS) to be provided by the proposed funding at a total estimated cost of about \$45 million. The average duration of the course is about three months but it will depend on the trades to be included into the initiative in consultation with stakeholders.
- Employers will be encouraged to employ graduates and pay them a wage of not less than \$8,000 per month, which will be further raised to not less than \$10,000 per month after six months.
- The staff cost and other operating expenses of these training programmes will be met by CIC.
- Target number of trainees – about 3 000

Progress

- The ECMTS was rolled out in September 2010 and has been progressively extended to cover seven trades experiencing more acute worker shortage, namely Carpenter (Formwork), Bar-bender and Fixer, Drainlayer, Metal Formwork Erector and Concretor, Leveller, Metal Worker and Site Surveying Officer.
- To further enhance the ECMTS, the Hong Kong Construction Association (HKCA) announced on 24 January 2011 a pledge that the participating contractors will employ the graduates at a

monthly wage no less than \$10,000 and then no less than \$15,000 after six months of the employment.

- Up to end January 2012, 935 trainees (excluding 180 dropped out) have participated in the scheme and among them, about 60% were aged below 35 and many were new entrants, indicating that the new initiative has succeeded in attracting more young people to join the construction industry.

**(ii) Advanced training course for senior construction workers**

Description

- Provide free of charge language and basic management training courses to in-service senior construction workers to be covered by the proposed funding at an estimated total cost of about \$3 million, i.e. around \$2,000 per trainee.
- This is a completely new course to be provided free of charge to in-service senior workers to equip them with necessary language and basic management skills. This will facilitate the building up of a career ladder for senior workers to advance to the frontline supervisory/management level. Upon acquiring sufficient experience, they may take further supervisory level training courses to acquire higher qualifications or start their own business in the trades.
- CIC will be responsible for organising the advanced training course.
- Target number of trainees – about 1 500

Progress

- The course was launched in May 2011. Up to end January 2012, 90 trainees have joined the courses, and 17 of them have graduated.

**(iii) Enhanced construction supervisor / technician training**

Description

- Increase the training allowance of the Enhanced Construction Supervisor / Technician Training Scheme (ECSTS) to \$150 per day to be provided by the proposed funding at a total estimated cost of about \$20 million. The duration of the course will be about one year.
- CIC will be responsible for all operating expenses for the provision of the additional training places.
- Target number of trainees – about 600

Progress

- CIC has adjusted the existing training programme of ECSTS in consultation with industry stakeholders making it more suitable for meeting the need of the industry. Subject to the funding approval to extend the course in paragraph 24 of the paper, CIC plans to launch the new course under ECSTS in the first half of 2012.

**(iv) Subsidy for fees of trade tests, specified training courses (STCs)<sup>6</sup> and skills enhancement courses**

Description

- Applicants of selected trade tests will be provided with a no more than \$500 fee subsidy per test.
- Provide new skills enhancement courses free of charge for workers of some trades to facilitate their taking of the trade tests. The subsidised course fees are estimated to be about \$1,000 per place.

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<sup>6</sup> Pursuant to s.41 of the Construction Workers Registration Ordinance (Cap. 583), experienced construction workers satisfying certain registration requirements may attain registered skilled workers qualification through attending a specified training course designated by CWRA and passing the corresponding skill assessment.



- Target number of places – about 6 000 each for trade test and skills enhancement courses.
- Applicants for selected STCs will be provided with no more than \$500 fee subsidy per course.
- Target number of places – about 6 000.
- While CIC will be responsible for all administrative/ operating costs related to the provision of the trade tests and STCs and the organisation of the skills enhancement courses, the subsidies for the fees of taking the trade tests and STCs as well as the skills enhancement courses are to be provided by the proposed funding.

#### Progress

- Subsidy for fees of trade tests and STCs has been extended to cover 38 trades. Up to end January 2012, CIC received 1 544 applications for the subsidy for trade tests and 261 applications for the subsidy for STCs.
- CIC has also organized skills enhancement course for trades with relatively low passing rate of trade test, such as plumbing. Up to end January 2012, there were 134 applicants of the courses, and 104 of them have completed the courses.
- Notably, this initiative will also provide incentive for in-service workers to become multi-skilled through continual learning, say, by taking trade tests of more than one trade so as to enhance its competitiveness and employability in the construction industry.

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## Annex 6

### “Build Up Publicity Campaign” Programme of major Publicity and Promotion Activities

Activities	Time
Secretary for Development kicked start the Campaign in the Considerate Contractors Site Award’s Ceremony	9 May 2011
Newspaper supplement to publicise the start	10 May 2011
Television announcement of public interests	16 May 2011 onwards
Giant outdoor banners on government buildings and public works sites	May to September 2011
Bus body advertisement	May 2011
Newspaper print advertisement	16 to 29 May 2011 (Monday - Thursday)
Thematic website - First phase Second phase	16 May 2011 onwards End 2011 onwards
Online banner advertisements	June 2011
Newspaper Advertorials and Pamphlets in the water bills	September and October 2011
Construction JobsNet <sup>7</sup>	October 2011
Construction Charity Fund raising concert* <sup>8</sup>	24 November 2011
Facebook games and apps for smartphones	November 2011 onwards
Opening of CIC’s Resource Centre*	23 February 2012
RTHK Documentary on TVB Jade* the real life success stories of construction personnel.	January - March 2012

\* In collaboration with CIC.

<sup>7</sup> To turn around the non-transparency job market of the industry and provide a one-stop job platform to increase workers mobility, CIC launched in October 2011 the Construction JobsNet for contractors to post and workers to find jobs vacancies online.

<sup>8</sup> With the pan-industry collaboration by DEVB, CIC and the Construction Industry Charity Fund, the Concert successfully to raise more than \$13 million to provide immediate financial assistance to families of the deceased workers due to construction accidents.

**Comparison between the Proposed Measures and Existing Measures under the approved commitment of \$100 million**

Existing measures under the commitment of \$100 million approved by LegCo FC on 28 May 2010	Proposed Measures under the additional commitment of \$220 million	Objectives of Measures
<b>(i) Enhanced construction manpower training for selected trades</b>		
<ul style="list-style-type: none"> <li>• Target no. of trainees – about <b>3 000</b>.</li> <li>• The training allowance of trainees of selected trades has been increased from about \$2,000 per month to an average of about <b>\$5,000 per month</b> for an average duration of about <b>three months</b>, which depends on the trades to be included into the initiative in consultation with stakeholders. The total estimated cost is about \$45 million.</li> <li>• The staff cost and other operating expenses of these training programmes will be met by CIC.</li> <li>• Employers will be encouraged to employ graduates and pay them a wage of no less than <b>\$8,000</b> per month, which will be further</li> </ul>	<ul style="list-style-type: none"> <li>• Target no. of trainees will be increased to about <b>6 000</b> to meet anticipated demand.</li> <li>• Increase the training allowance to an average of about <b>\$8,000 per month</b> for trainees of selected trades to be provided by the proposed additional funding at a total estimated cost of about <b>\$165 million</b>. The average training duration should be revised to an average of about <b>five months</b> according to the trades selected.</li> <li>• The staff cost and other operating expenses of these training programmes will be met by CIC.</li> </ul>	<p>To maintain the attractiveness of the construction industry to the new entrants and encourage in-service workers for skills upgrading, and increase the training output to meet the anticipated demand.</p>

Existing measures under the commitment of \$100 million approved by LegCo FC on 28 May 2010	Proposed Measures under the additional commitment of \$220 million	Objectives of Measures
<p>increased to no less than <b>\$10,000</b> per month after 6 months. On 24 January 2011, HKCA pledged to increase them to \$10,000 and \$15,000 respectively.</p>		
<b>(ii) Enhanced construction supervisor / technician training</b>		
<ul style="list-style-type: none"> <li>• Target no. of trainees – about <b>600</b></li> <li>• The training allowance has been increased from about \$105 to <b>\$150 per day</b> for a course duration of about <b>nine months to one year</b>. The total estimated cost is about <b>\$20 million</b>.</li> <li>• CIC is responsible for all operating expenses for the provision of the additional training places.</li> </ul>	<ul style="list-style-type: none"> <li>• Target no. of trainees will be increased to about <b>1 000</b>.</li> <li>• Increase the training allowance to <b>\$180 per day</b>, which is equivalent to about <b>\$4,300 per month</b> for 24 training days a month, during the initial about 9-month classroom training period, and then to <b>\$250 per day</b>, which is equivalent to about <b>\$6,000 per month</b> for 24 training days a month during the subsequent 6-month site training period, to be provided by the proposed additional funding at a total estimated cost of about <b>\$55 million</b>. The average duration of the course will be about <b>15 months</b>.</li> <li>• CIC is responsible for all operating expenses for the provision of the additional training places.</li> </ul>	<p>Ditto</p>

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