

简 报

第 2 期

中建协建筑业高质量发展研究院（筹）

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关于新冠肺炎疫情对建筑业企业影响的 调查报告

为了解新冠肺炎疫情对建筑业产生的影响，掌握建筑业企业在复工中存在的实际困难，中国建筑业协会开展了《新型冠状病毒肺炎疫情对建筑业企业的影响》的问卷调查。截至 2020 年 3 月 31 日，共回收有效问卷 804 份，覆盖全国 30 个省、自治区、直辖市（缺吉林省）。

一、基本情况

参与调查的 804 家企业，东部地区 518 家，占 64.43%；中部地区 184 家，占 22.89%；西部地区 102 家，占 12.68%。其中，参与调查的湖北企业有 77 家，占 9.58%。

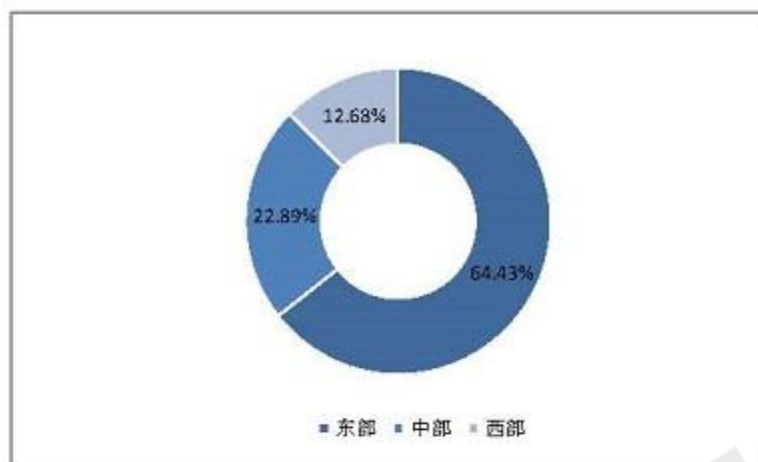


图 1：受调查企业地区分布

受调查企业主项资质为房屋建筑工程的有 659 家，占 81.97%；主项资质为土木工程的有 204 家，占 25.37%；主项资质为工业设备安装工程的有 105 家，占 13.06%。

50.37%的受调查企业年产值在 10 亿元以下，24.25%年产值在 10 亿元到 50 亿元，10.45%年产值在 50 亿元到 100 亿元，7.34%年产值在 100 亿元到 200 亿元，年产值超过 200 亿元的企业占 7.59%。

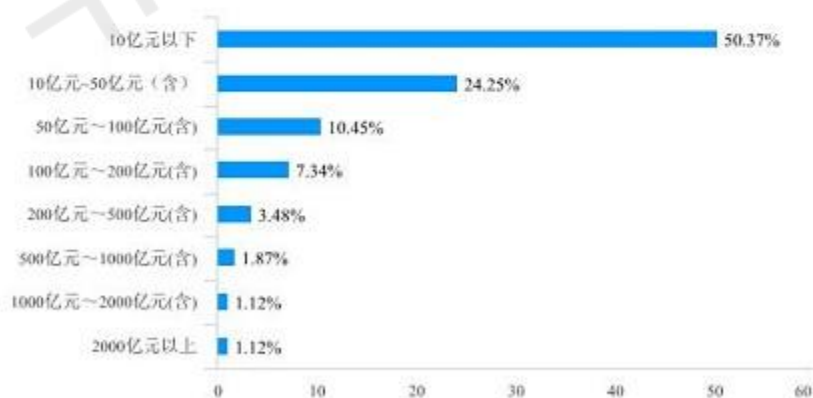


图 2：受调查企业年产值情况

60.95%的企业认为疫情对企业生产造成很大影响，31.84%的企业认为受疫情影响较小，6.97%的企业认为疫情目前对企业没有影响，但未来有潜在影响，只有0.25%的企业认为疫情不带来影响。

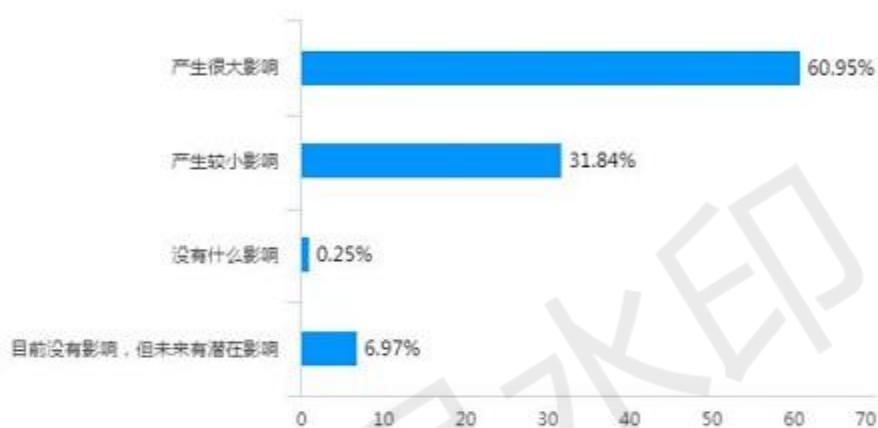


图 3：疫情对企业产生的影响

受疫情影响，34.95%的受调查企业认为可以完成年度业绩目标的 80%，49.38%的企业认为可以完成年度业绩目标的 80-90%，15.67%的企业认为能够全面完成年度业绩目标。

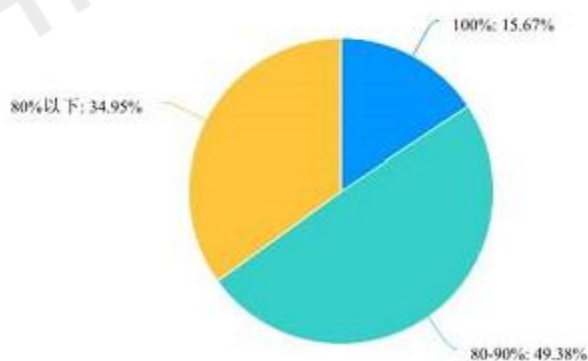


图 4：企业对完成年度业绩目标的预计

总体来看，多数受访企业认为此次疫情会对自身生产经营造成一定影响，并将为如期完成年度业绩目标带来不利因素。

二、主要影响



图5：疫情对企业带来的影响

1、拖延施工进度，影响合同工期。90.55%的受调查企业认为疫情会导致施工生产进度拖延，55.85%的受调查企业认为疫情将影响项目不能按合同工期正常交付。

2、现场停工造成资本浪费和成本增加。68.91%的企业反映，停工造成资本浪费和成本增加。成本维护费用平均涨幅14.75%。防疫成本投入占合同总价的平均比例为1.82%。

企业预计，每停工一天所带来的产值损失，在10万元以下的占36.32%，在10-50万元的占24.38%，在50-100万元的占11.69%，在100-500万元的占12.69%，在500-1000万元的占5.47%，还有9.45%的企业日损失产值在1000万元以上。

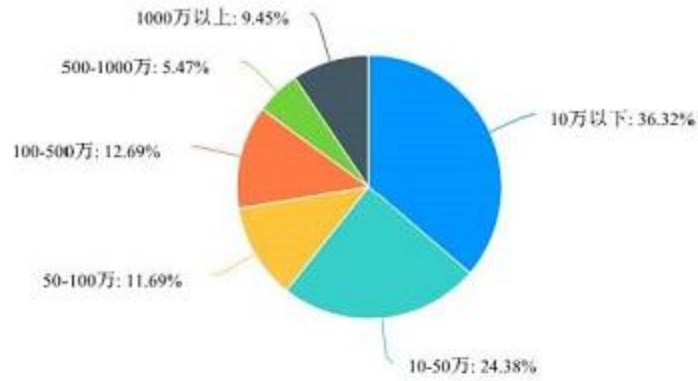


图 6：企业停工的日产值损失

3、原材料、人工费、运输费等成本上涨。42.41%的企业反映原材料等上游供应链出现断裂，31.09%的企业反映原材料价格有所上涨，平均上涨幅度约为 18.24%。

66.04%的企业反映劳动力、人员供给减少，26.37%的企业反映存在招工难。19.90%的企业反映人员工资上涨，平均上涨幅度为 24.88%。

另有 41.17%的企业反映，疫情对人员交通和企业物流造成一定影响。

三、应对措施



图7：企业针对疫情的应对措施

面对疫情带来的不利影响，受调查企业普遍采取了积极的应对防护措施，并对企业安全生产和施工计划做出相应调整，确保“一手抓防疫，一手抓复工”。

1、完善防疫措施。96.27%的企业做到了员工体温检测和健康追踪，92.54%的企业定期在项目作业区进行消毒杀菌，71.02%的企业对项目住宿人员和食堂分餐给予保障，37.94%的企业调整了工作空间的职能划分。此外，一些企业还采取了设置专门隔离点，为复工人员进行核酸检测，免费发放防疫物资等措施，确保防疫工作万无一失。

2、分批复工复产。受疫情影响，80.35%的企业将延期开工，79.85%的企业重新调整了生产计划，75.75%的企业正在逐步分批复工。3月6日前已经复工的受调查企业占74.76%。

企业普遍认为，满足开工条件的工地应对进出场人员进行严

格管理，加强工人的宣传教育，企业应做好应急响应机制，合理安排施工作业内容，建立封闭式管理制度，做好防疫物资的后期储备等。

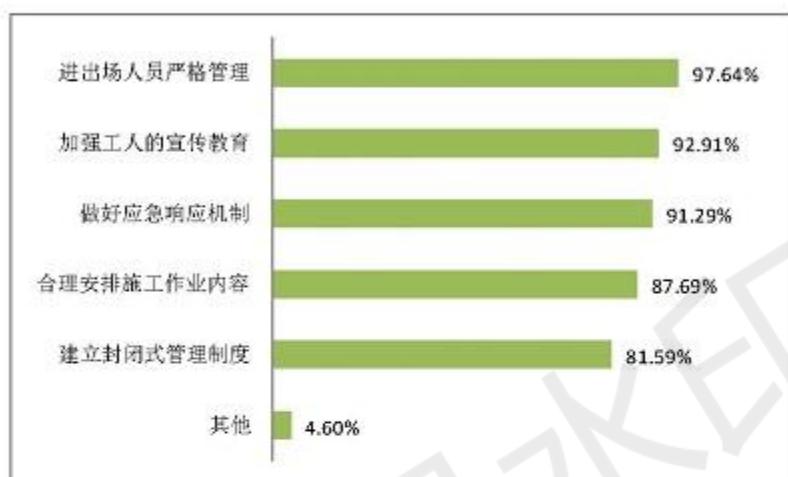


图 8：复工工地应具备的条件

3、信息化应用水平提高。55.35%的企业更多岗位转为在线办公，47.64%的企业和员工沟通更多转为点对点和线上。企业采用信息化手段和数字技术代替相关业务的水平显著提高，劳务实名制平台、在线会议系统、体温智能检测系统、协同办公系统、视频监控系统在企业中的应用程度都超过了50%。一些企业还应用了人工智能、资源生态平台、项目管理信息化平台等。



图 9：企业应用信息化技术的情况

四、突出问题

目前，各地建筑业企业在做好防疫工作的同时，已陆续复工复产。经调查，企业反映较为突出的问题主要集中在：

1、复工验收难。75.50%的企业认为，应为复工验收开通绿色通道。企业反映，各地项目复工大多需要提交审批文件，除防疫医院、重大民生工程外，许多地方政府部门对一般工程复工审批持谨慎态度。各地大多根据疫情设置了复工需具备的条件，尤其是防疫物资的准备，项目上很难准备齐全。即使项目具备复工条件，向地方建委提出复工申请后，由于申报项目较多，等待复工检查验收仍需较长时间。

2、劳务用工难。57.96%的企业希望政府和行业主管部门能够为复工复产企业提供人力资源保障，解决企业用工难问题。建筑业是劳动密集型行业，对稳就业具有重大保障作用。长期以来，建筑行业一线作业人员流动性强，老龄化问题突出，疫情之下迭

加了用工荒、用工贵难题。有企业反映，2020年1月底至3月底，劳务工人工资上涨了5-7倍，复工后上涨幅度达30-50%。

3、资金周转难。停工为企业带来了成本增加，加之上游房地产行业资金回流变缓和下游建筑材料价格上涨，导致建筑业企业资金周转压力、成本管控压力加大。一些企业现金流入大幅降低，面临资金周转困难局面。80.6%的企业建议政府部门提供针对疫情停工及防疫工作的补贴，62.81%的企业支持出台缓解现金流压力的多项扶持政策。

4、供应链保障难。复工前期，建筑材料、机械设备等物资供应链紧张，施工现场“等米下锅”矛盾显著。目前，随着多地疫情逐步好转，水泥、钢材等建筑材料生产厂家逐步复产，材料供应紧张的问题得到一定缓解。但仍有56.72%的企业希望开通交通运输绿色通道，加快物流、人流的周转速度。

5、防疫物资采购难。56.22%的企业希望政府和行业主管部门能够帮助企业购买防疫物资，并加强对疫情防控工作的指导。企业反映，目前短缺的物资主要是口罩、电子额温枪等。一些已经复工的项目，防疫物资储备也明显不足，不足以支持人员逐步返场后的全面施工。此外，还有41.17%的企业希望有关部门能为复工企业职工集中住宿和分餐等提供协助和便利。

五、有关建议

1、在建设项目疫情防控责任落实到位和建筑工程质量安全监管责任落实到位的前提下，优化复工审批手续。对于低风险区，

取消备案和审批，加快开工速度，对于中高风险区，以防控为前提，制定并公布必要的复工条件，简化办理流程，实现一站式办理。

2、贯彻《关于应对新冠肺炎疫情影响强化稳就业举措的实施意见》，发挥建筑业突破口作用和对扶贫的突出贡献，完善建筑产业工人的社会保障体系，推行建筑工人生活营地物业化管理，吸纳新生代农民工充分就业。

3、受疫情的影响，所有在建工程无一例外面临工期延误、合同不能及时履行、停工期间施工单位直接损失等问题。建议出台文件明确工期顺延的起止点，停工的损失具体包括哪些内容、如何计算和分担。

4、对疫情期间企业为承建项目所产生的疫情防控成本和因疫情造成上涨的人工费、建材费、物流费等，列入工程造价据实计算并予以追加。鼓励建设单位与施工企业、工程总承包企业加强互助，合理分担损失，协商提高工程款支付比例。鼓励建设单位采取电子邮件、网上交流等信息化手段解决项目过程结算和竣工结算，及时足额支付应付未付款项。

5、推动行业供应链平台建设，建立建筑业集中采购及金融服务平台。将防疫物资纳入物资保障供应链，帮助企业解决当前复工复产防疫物资的紧迫需求。

6、疫情发生以来，建筑业企业快速高效完成了火神山、雷神山等应急医院建设，标准化、模块化、工业化、装配化的新型

建造方式优势凸显。应以此次疫情为契机，进一步加快推广装配式建筑，推广数字技术、智能建造技术在建筑业的应用，促进建筑业加快转型升级。

非会员水印

Investigation Report on How Covid-19 Impacted the Chinese Construction Enterprise

China Construction Industry Association (CCIA)

The Covid-19 pandemic are spreading rapidly around the world, and severely impacting the world economy, anticipated in UN's *World Economic Situation and Prospects as of 2020*, the world economy would shrink by at least 1% or even more in 2020. ADB lowered the economic growth anticipation from 5.5% of last September to 2.2%. To get the grounded and first-hand information on how the Covid-19 impacted the Chinese construction industry, to know about the company's difficulties and challenges, as well as their corresponding measures, so as to provide better and targeted service to the Chinese construction companies, CCIA conducted the questionnaire on *Impact of Covid-19 on Chinese Construction Enterprise*. Till March 31, 2020, 804 valid answer sheets from 30 provinces, municipalities and cities came back.

1, General situation

Altogether 804 construction enterprises took the questionnaire, including 518 enterprises from eastern China, accounting for 64.43%, 184 from Central China, accounting for 22.89%, and 102 from western China, accounting for 12.68%, among them, 77 are from Hubei province, accounting for 9.58% of the total.

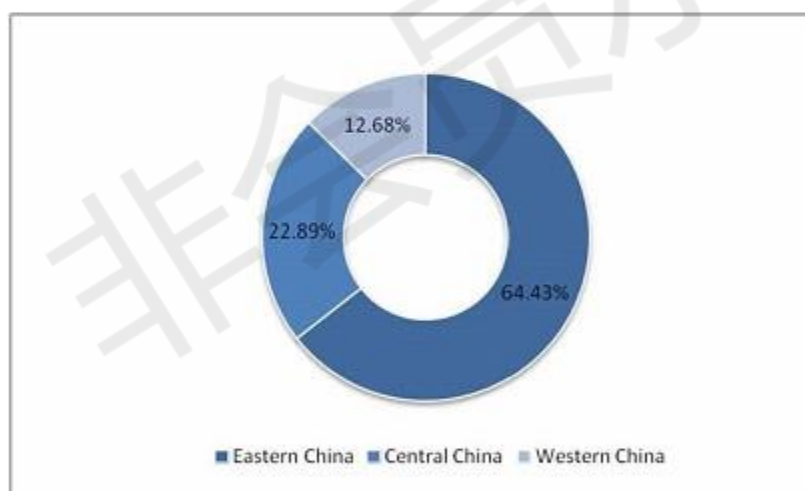


Figure 1 Locality Distribution of Surveyed Enterprises

Of all the surveyed enterprises, 659 are with the main registered certificates in housing engineering, accounting for 81.97%, 204 in civil engineering, accounting for 25.37%, 105 in industrial equipment installation, accounting for 13.06%.

The annual output of 50.37% of investigated enterprises are less than ¥1 billion, 25.25% are somewhere between ¥1 billion and ¥5 billion, 10.45% are between ¥5 billion and ¥10 billion, 7.34% are between ¥10 billion and ¥20 billion, only 7.59% of them have an output of over ¥20 billion.

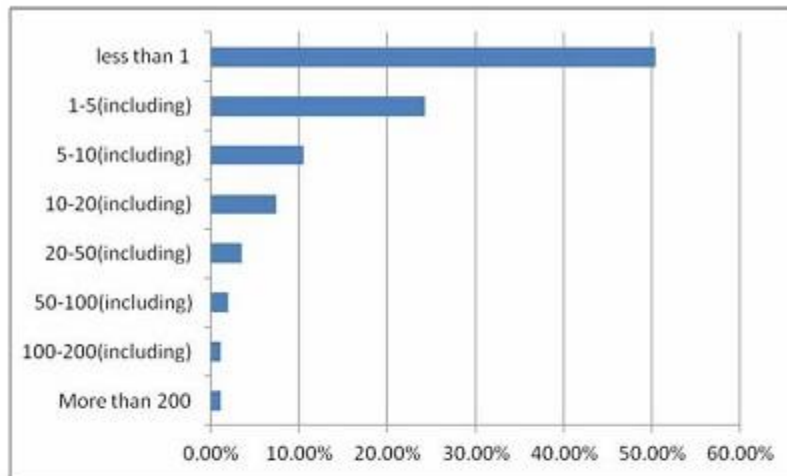


Figure 2 Annual output of surveyed enterprises(unit: billion)

Of all 804 investigated enterprises, 60.95% admitted the coronavirus posed great negative impact on the business operation, 31.84% thought the impact is mild, 6.97% said the pandemic did not impact their operation currently but would in a long-run, only 0.25%believed the pandemic has no impact on their business operation.

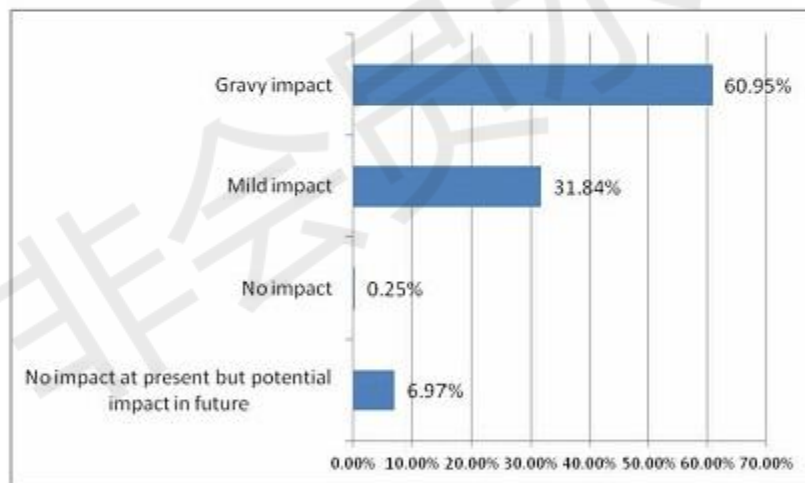


Figure 3 Impact of Covid-19 on construction enterprises

According to questionnaire, 34.95% of investigated enterprises will complete 80% of the annual target, 49.38% will complete 80-90% of the target for 2020, only 15.67% believed they will fully complete the year's target. Known from the statistic that most construction enterprises thought the pandemic would have certain degree of negative impact on their operation, and would have negative influence in their efforts to fulfill the year's target.

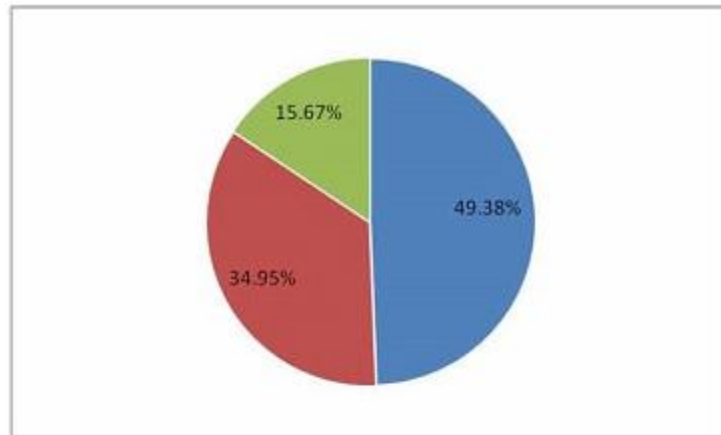


Figure4 How much the 2020 target is expected to be finished

2, Main influential factors

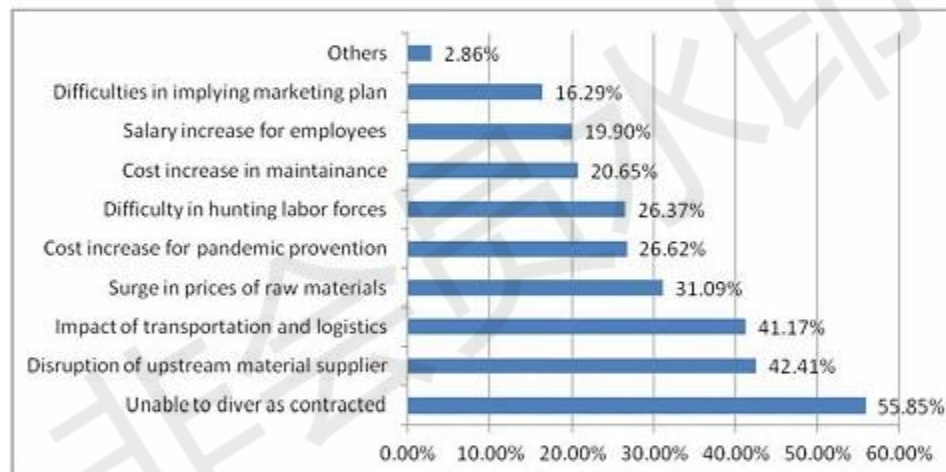


Figure5 How Covid-19 impact the construction enterprises

2.1 Project delay would affect contracted construction period.

Among investigated enterprises, 90.55% said that affected by the pandemic, there would be a delay in the construction, 55.85% said that due to the pandemic, the company would have difficulties in delivering the project as contracted.

2.2 Project suspension caused fund waste and cost loss

68.91% of investigated enterprises said the suspension of construction projects caused capital and cost lost, with maintenance expenses increase at an average rate of 14.75% and Covid-19 control and prevention expenses accounting for 1.82% of total contract value in an average level.

Survey data showed that project suspension would result in severe economic losses. 36.32% of enterprises reported an output loss of less than ¥0.1million per day, 24.38% reported the daily loss

between ¥0.1-0.5million, 11.69% reported ¥1-5million, 5.47% were between ¥5-10million, and 9.45% even suffer a loss as high as ¥10million.

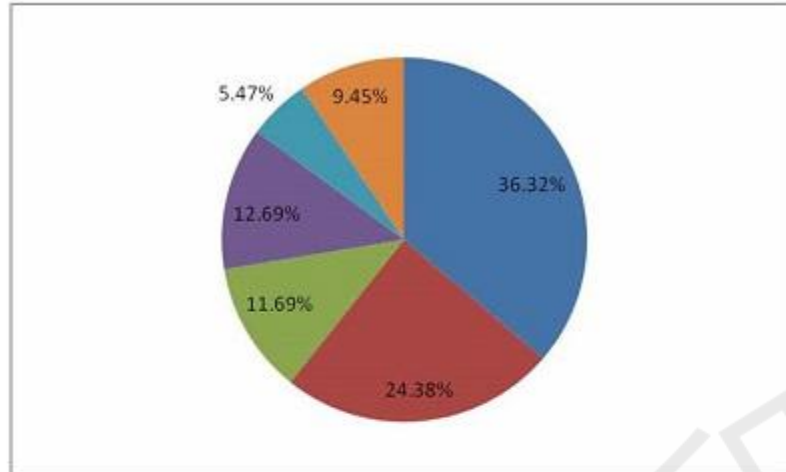


Figure6 Daily losses due to production suspension

2.3 Surge of prices in raw material, labor forces and transportation.

42.41% of surveyed enterprises reported a disruption of raw material from upstream supplier, 31.09% reported an increase in raw materials, with an average increase rate of 18.24%.

66.04% of enterprises reported a shortage in labor forces and workers, 26.37% faced a challenge in employing labor forces. 19.90% reported an average salary increase of about 24.88%.

41.17% thought the pandemic posed certain difficulties in personnel transporting and commuting as well as material flowing and logistics.

3, Corresponding measures

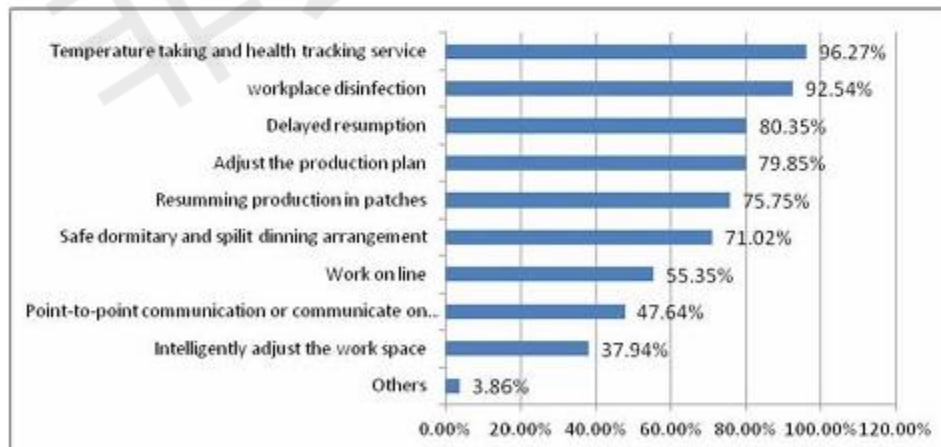


Figure7 Countermeasures against Covid-19

Facing the negative impact caused by coronavirus, almost all construction enterprises deployed

effective controlling and prevention measures, and adjusted the working plan for safe construction, to ensure the safety and health of workers while ensuring resumption of operation and production.

3.1 Effective measures in pandemic control and prevention

96.27% of enterprise deployed the temperature taking and health tracking of worker. 92.54 carried out regular disinfection in workplaces. 71.02% made the arrangement for workers living in project dormitory and ensured their separate dining. 37.94% distanced the work spaces for workers based on their respective personal function. To ensure the full success in disease control and prevention, some enterprises have set up isolation wards, conducted nuclear acid testing and gave out protecting goods for free.

3.2 Resuming production and construction in patches

Due to coronavirus, 80.35% of enterprises delayed the resumption of operation, 79.85% adjusted their working schedule, 75.75% are gradually restoring operation in patches, and 74.76% have restarted the operation completely.

All surveyed enterprises said the strictly management and well informed and trained service for workers should be carried out in projects where the requirements for resumption are fully met. The enterprises should have the emergency measures in place, make appropriate arrangement for daily work, set up closed-off management system, and have a full storage of pandemic preventing goods and materials.

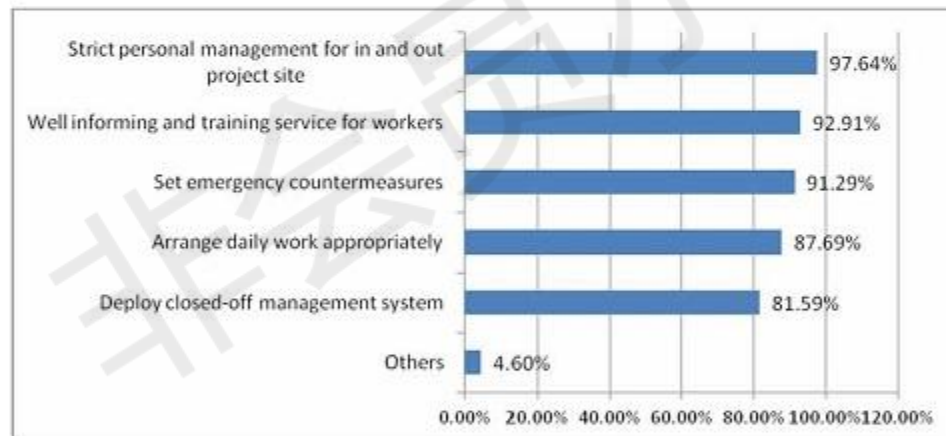


Figure 8 Precondition for resumption of production

3.3 Improved application of IT technology

55.35% of surveyed enterprises have the most work carried out on line. 47.64% of internal communications were made on point-to-point base or on line. There's a significant improvement in the application of IT technology and digital technology. Over 50% of enterprises introduced real name register platform, video conference system, intelligent temperature taking system, coordinated office system and video surveillance system. Some enterprises even adopted the AI, resource recycling platform, IT-assisted project management platform etc.

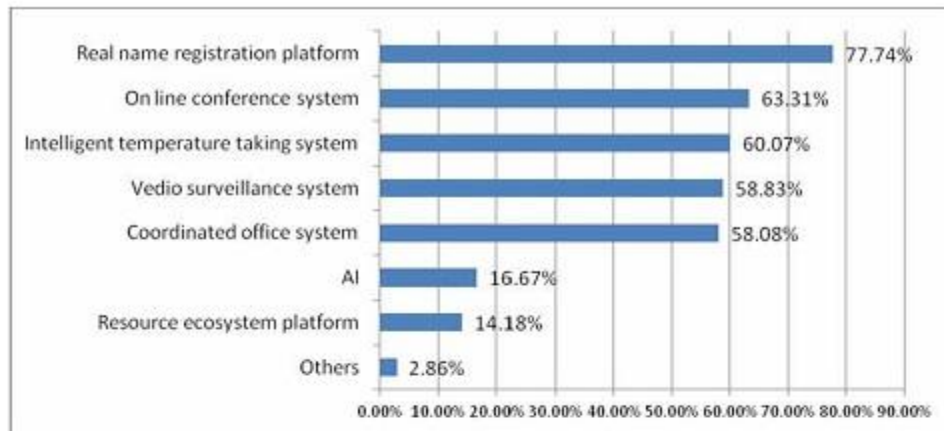


Figure9 Application of IT technology in construction enterprises

4, Outstanding problems

Currently, construction enterprises across China have gradually restored operation while ensuring pandemic prevention and control. Known from our questionnaire that the prominent problem faced by them are:

4.1 Difficulty in resumption approval

75.50% of surveyed enterprises suggested that the green path for resumption inspection should be provided for construction enterprise. They complained that a lot of paper work are required while apply for restoration of production in various localities. Except for hospitals supporting the pandemic efforts and major livelihood projects, all local governments are quite cautious in approving the resumption or construction projects, they put forward requirements for resumption, especially regarding the preparation for pandemic control and prevention, which the enterprises found is hard to meet. On the other hand, since lots of construction projects applied for resumption, even all required items are met, the company has to queue up for a long time.

4.2 Difficulties in hunting labor forces

57.96% of surveyed enterprises are looking for responsible governmental institutes to address the problem of shortage in labor forces and to provide security in ensuring the labor forces for re-operated enterprises. Construction industry is a labor-intensive industry, plays an important role in ensuring the stable employment. For years, there have been problems of high persona flowing and age population, all these added to the problem of shortage and high cost of labor forces. Reported by the survey enterprises that from the end of January through the end of March this year, the salary for labor forces increased by 5-7 times, and 30-50% higher than normal after the restart of operation.

4.3 Difficulties in fund flow

Operation suspension caused increase in cost, which along with the slowed fund collection from upstream real estate market and the increased prices from downstream construction material suppliers, ultimately resulted in difficulties in ensuring fund flow and cost control. Some enterprises

face notable reduction in currency collection which directly leads to fund flow difficulty. According to our survey, 80.6% of enterprises suggested government to introduce production shutdown subsidies and pandemic prevention subsidies. 62.81% of them looking for multiple supporting measures taken by government institutions to ease the currency difficulty.

4.4 Difficulties in ensuring supply chain

Prior to the resumption of production, there was a shortage in supply chain for construction material and machineries and equipments, a lot of projects have been halted waiting for the supply. With the encouraging development of pandemic situation in various regions, the cement and steel plants have gradually restarted production and greatly eased the shortage in material, but still 56.72% of enterprises suggested to open the green path to facilitate the transportation and logistics both for construction materials and workers.

4.5 Difficulties in purchasing goods and material for pandemic control and prevention

56.22% of surveyed enterprises appealed the government institutions for guidance in pandemic control and prevention, as well as for the help in the purchase of face masks and electronic forehead thermometers etc. which are some most urgent needed prevention goods. Some projects, which have partially resumed production, faced a significant shortage in goods and materials for pandemic control and prevention to ensure the complete resumption. 41.17% of enterprises called for government to provide support and help in ensuring the enough dormitory and separate dining for workers back on projects.

5. Corresponding suggestions

5.1 On the premise that responsibilities for ensuring the efficient disease control and prevention and ensuring the inspection and management for safe production are in place, the inspection and approval procedures should be optimized. In low risk areas, the records and approval requirement should be cancelled, so as to speed up the resumption. In medium and high risk areas, based on precondition of effective pandemic control, the necessary requirements for resumption should be worked out and issued so as to simplify the application procedure into one-stop service.

5.2 To fully implement the *Suggestions on the Implementation of measures to cope with the impact of Covid-19 and to stabilize employment*. To give full play to the construction industry's role as breakthrough and its outstanding contributions in poverty alleviation, to improve the social insurance system for construction workers, to introduce the property management method in project living camp, and to attract more young migrant workers.

5.3 Impacted by Covid-19, all ongoing projects face problems such as delaying; fail to fulfill the contract and direct economic losses during suspension among others. Enterprises suggested the government to issue relevant document so as to clearly stipulate the starting date and ending date for postponed projects, as well as specify the losses caused by suspension, and how they should be calculated and distributed.

5.4 It was suggested that all increased expenses, including spending on pandemic control and prevention and increased expenses for labor forces, construction materials and logistics, should be calculated and added into the project cost to be refund on the bases of real term. Should encourage the owner, construction company and general contractor to enhance cooperation, reasonably share

losses among them, and raise the percentage of interim payment. Encourage owners, with the assistance of IT technology such as email and communication on line to pay the interim payment and final payment on time.

5.5 To accelerate the building of supply chain platform in construction industry, to set up the collective purchase and financial service platform, to include the purchase of protecting goods and items in supply chain for secured goods and resources. To help the enterprises to address the urgent needs for protecting goods and material needed for resumption.

5.6 At the beginning of the outbreak, construction enterprise quickly responded and efficiently finished the construction of Huoshenshan and Leishenshan Hospitals, the prominent advantages of new engineering methods such as standardized, module-based, industrialized and pre-fabricated engineering were fully deployed in the process. We should take this as an opportunity to further promote the application of digital technology and intelligent technology in construction as well as pre-fabricated engineering, so as to accelerate the transformation and upgrading of construction industry.